

25-81-24

SOUTHWEST FISHERIES CENTER

NATIONAL MARINE FISHERIES SERVICE

SOUTHWEST FISHERIES CENTER

P.O. BOX 271

LA JOLLA, CA 92038

NOVEMBER 1987

SOUTHWEST FISHERIES CENTER CURRENT YEAR OPERATION PLANS FOR FISCAL YEAR 1988

Compiled by

D. J. Mackett

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ADMINISTRATIVE REPORT NO. LJ-87-24

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NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL MARINE FISHERIES SERVICE
SOUTHWEST FISHERIES CENTER
CURRENT YEAR OPERATION PLANS FOR
FISCAL YEAR 1988

This report presents the FY 1988 Current Year Operation Plans (CYOPs) of the Southwest Fisheries Center (SWFC). Budget summaries for each Task and for each SWFC Laboratory or Division are also presented.

The Current Year Task Plans of the Southwest Fisheries Center set out the objectives, significance or justification, resources, activities, events and milestones for each project (Task) undertaken by the Center during the fiscal year. In several cases two or more Tasks may constitute elements of a larger program.

The CYOPs are presented in Reference Number sequence which, through the process of adding, deleting, and consolidating Tasks over the years no longer has any other organizational or subject matter significance.

The CYOPs are plans, and as such, represent the best estimates that the staff could make during the Fall of 1987. The user is cautioned to use the data only as estimates; details of budget or program changes put into effect since October 1, 1987 can be obtained from the Center Director.

Finally, the information concerning detailed allocations among budget classes (labor, contracts, travel, etc.) presented in this revision should be handled cautiously so as to safeguard the Government's competitive procurement process.

David J. Mackett
Program Planning Officer
Southwest Fisheries Center
La Jolla, California

SOUTHWEST FISHERIES CENTER

CURRENT YEAR OPERATION PLANS

FISCAL YEAR 1988

(BUDGET ALLOWANCES AS OF OCTOBER 1, 1987)

<u>Laboratory/Division</u>	<u>Reference No.</u>	<u>Title</u>	<u>FTE</u>	<u>Total Direct Funds (\$K)</u>
Center Totals			<u>243.7</u>	<u>12,382.0</u>
Center Management	SWC-035	Center/Lab Support - Management Fund	<u>12.1</u>	<u>1,052.5</u>
La Jolla Support and Special Projects			<u>20.6</u>	<u>1,932.8</u>
	SWC-036	Information Technology Services	7.5	333.0
	SWC-037	Scientific Reference and Editorial Services and Special Projects	10.0	846.8
	SWC-123	Fishery Information Network	3.1	178.0
	SWC-124	Limnological Study of Lake Mead, NV (UNLV)	0	300.0
	SWC-125	Fishery Management Plan Development - Hawaii (O.I.)	0	275.0
Coastal Fisheries Resources Division La Jolla			<u>44.2</u>	<u>1,913.3</u>
	SWC-001	Population Biology of Fishes of the Coastal E. Pacific	10.8	497.4
	SWC-004	Fisheries Environment Investigation	5.0	254.6
	SWC-018	Ecology and Systematics of Fishes - CalCOFI	5.0	205.9
	SWC-019	Coastal & Pacific Fisheries	9.5	341.7

SWC-020	Resources Investigation Survey Systems Development and Evaluation	4.7	146.0
SWC-091	Commercial & Recreational Fisheries Research for Management	7.2	432.2
SWC-903	Shallow Water Habitat Investigation	2.0	35.5
		<u>19.0</u>	<u>869.1</u>
SWC-050	Tuna and Billfish Assessment	7.0	360.2
SWC-053	Tuna Fishery Monitoring and Evaluation	3.0	199.5
SWC-057	Multispecies Data Collection and Evaluation	9.0	309.4
		<u>2.6</u>	<u>119.1</u>
SWC-015	Senior Scientist - Marine Mammals	2.6	119.1
		<u>28.4</u>	<u>1,431.3</u>
SWC-008	ETP Dolphin Monitoring	6.4	265.3
SWC-011	Biological Systems	6.5	239.3
SWC-012	Tuna Vessel Observer Data	6.5	265.0
SWC-096	Coastal Marine Mammals	3.0	166.8
SWC-097	Survey Operations - MOPs	4.0	384.8
SWC-098	Photographic and Remote Sensing	2.0	110.1
		<u>30.1</u>	<u>1,373.8</u>
SWC-034	Tiburon Laboratory Management and Administration	8.4	376.6
SWC-061	Underutilized Fisheries Resources	1.9	125.2
SWC-062	Groundfish Analysis Investigation	8.8	372.8
SWC-064	Groundfish Communities	6.0	224.7
SWC-065	Physiological Ecology of Pacific Coast Groundfish	5.0	274.5

Pelagic Fisheries
Resources Division

Senior Scientist

Fishery-Marine Mammal
Interactions Division

Tiburon Laboratory

Honolulu Laboratory

		<u>74.5</u>	<u>3,108.3</u>
SWC-021	Pelagic Stock Assessment Task	3.0	153.4
SWC-022	Pelagic FMP Research Program	2.8	142.8
SWC-025	Pelagic Ecosystem Program	4.3	182.9
SWC-033	Honolulu Laboratory Management and Administration	8.0	395.6
SWC-040	Data Management and Technical Services	14.8	543.0
SWC-044	Insular Ecosystem Study	2.6	107.2
SWC-045	Seamount Resources Study	4.4	217.5
SWC-046	Insular Fisheries Habitat Research	10.5	293.0
SWC-048	Insular Stock Assessment	4.7	197.5
SWC-089	Fishery Management Research	6.0	373.0
SWC-116	Fishery Enhancement and Dynamics	3.6	145.1
SWC-119	Hawaiian Monk Seal/Pacific Turtles	9.8	357.3
		<u>12.2</u>	<u>581.8</u>

Pacific Fishery Environmental Group

SWC-092	Fishery/Environmental Climatology, Modeling and Forecasting - PFEG	12.2	581.8
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FY 1988

SOUTHWEST FISHERIES CENTER - CURRENT YEAR OPERATIONS PLANS

BUDGET ALLOWANCES AS OF OCTOBER 1, 1987

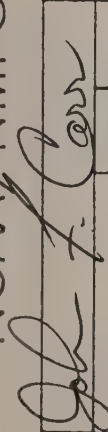
<u>Reference No.</u>	<u>Title</u>	<u>Task Leader</u>	<u>FTE</u>	<u>\$K</u>
SWC-001	Population Biology of Fishes of the Coastal E. Pacific	Hunter	10.8	497.4
SWC-004	Fisheries Environment Investigation	Laurs	5.0	254.6
SWC-008	ETP Dolphin Monitoring	Holt	6.4	265.3
SWC-011	Biological Systems	Dizon	6.5	239.3
SWC-012	Tuna Vessel Observer Data	Reilly	6.5	265.0
SWC-015	Senior Scientist	Perrin	2.6	119.1
SWC-018	Ecology and Systematics of Fishes - CalCOFI	Moser	5.0	205.9
SWC-019	Coastal & Pacific Fisheries Resources Investigation	Charter	9.5	341.7
SWC-020	Survey Systems Development and Evaluation	Smith	4.7	146.0
SWC-021	Pelagic Stock Assessment Task	Wetherall	3.0	153.4
SWC-022	Pelagic FMP Research Program	Skillman	2.8	142.8
SWC-025	Pelagic Ecosystem Program	Wetherall	4.3	182.9
SWC-033	Honolulu Laboratory Management & Administration	Shomura	8.0	395.6
SWC-034	Tiburon Laboratory Management & Administration	Abramson	8.4	376.6
SWC-035	Center/Lab Support - Management Fund	Barrett	12.1	1052.5
SWC-036	Information Technology Services	Roll	7.5	333.0

<u>Reference No.</u>	<u>Title</u>	<u>Task Leader</u>	<u>FTE (FTP)</u>	<u>\$K</u>
SWC-037	Scientific Reference and Editorial Services and Special Projects	Barrett	10.0	846.8
SWC-040	Data Management and Technical Services	Hamm	14.8	543.0
SWC-044	Insular Ecosystem Study	Boehlert	2.6	107.2
SWC-045	Seamount Resources Study	Boehlert	4.4	217.5
SWC-046	Insular Fisheries Habitat Research	Boehlert	10.5	293.0
SWC-048	Insular Stock Assessment	Ralston	4.7	197.5
SWC-050	Tuna and Billfish Assessment	Bartoo	7.0	360.2
SWC-053	Tuna Fishery Monitoring and Evaluation	Parks	3.0	199.5
SWC-057	Multispecies Data Collection and Evaluation	Coan	9.0	309.4
SWC-061	Underutilized Fisheries Resources	Kato	1.9	125.2
SWC-062	Groundfish Analysis Investigation	Lenarz	8.8	372.8
SWC-064	Groundfish Communities	Hobson	6.0	224.7
SWC-065	Physiological Ecology of Pacific Coast Groundfish	Whipple	5.0	274.5
SWC-089	Fishery Management Research	Pooley	6.0	373.0
SWC-091	Commercial & Recreational Fisheries Research for Management	Huppert	7.2	432.2
SWC-092	Fishery/Environmental Climatology, Modeling and Forecasting - PFEG	Bakun	12.2	581.8
SWC-096	Coastal Marine Mammals	Barlow	3.0	166.8

<u>Reference No.</u>	<u>Title</u>	<u>Task Leader</u>	<u>FTE (FTP)</u>	<u>\$K</u>
SWC-097	Survey Operations - MOPs	Holt	4.0	384.8
SWC-098	Photographic and Remote Sensing	Perryman	2.0	110.1
SWC-116	Fishery Enhancement and Dynamics	Polovina	3.6	145.1
SWC-119	Hawaiian Monk Seal/ Pacific Turtles	Gilmartin	9.8	357.3
SWC-123	Fishery Information Network	Carr	3.1	178.0
SWC-124	Limnological Study of Lake Mead, NV (UNLV)	Carr	0.0	300.0
SWC-125	Fishery Management Plan Development - Hawaii (O.I.)	Carr	0.0	275.0
SWC-903	Shallow Water Habitat Investigation	Hunter	2.0	35.5
Total allowed SWFC CYOPs October 1, 1987				\$12,382.0
(Includes \$700K for ETP Dolphin Survey and \$61K for Hawaiian Monk Seal expected from NMFS.)				

<u>Reference No.</u>	<u>Title</u>	<u>Task Leader</u>	<u>FTE (FTP)</u>	<u>\$K</u>
<u>Reimbursables and Tasks Funded by other NOAA Elements</u>				
SWC-901	Fishery Bulletin Editor	Dizon	1.5	53.6
SWC-904	Antarctic Krill Biomass	Lasker	.9	20.3
SWC-912	U.S.-Spain Joint Research	Lasker	0.0	7.3
SWC-SFU	San Francisco State University Support	Abramson	0.0	18.0
			Total	\$99.2

FMC	REF.NO.	PAGE
SWC	001	1 of 4

APPROVAL SIGNATURE	TITLE	PRIN. FAC.	FTE	\$K	UNIT LEADER	LINE ITEM NAME
	Population Biology of Coastal E. Pacific Fishes	La Jolla, CA	10.75	497.4	J.R. Hunter	

A. PROBLEM STATEMENT/OBJECTIVE: This task provides biological data needed for fishery independent biomass assessment of coastal pelagic and groundfishes and data needed for understanding the dynamics of these populations such as estimating the effect of environment and population size and structure on growth, reproduction, mortality, and recruitment. Data are also provided on potential interactions among major fish stocks.

B. METHODOLOGY/APPROACH: Our approach is to emphasize the development of new methodologies and evaluations of methods and assumptions underlying standard techniques while providing data needed for management of the stocks. Methodologies include: (1) laboratory studies designed to develop accurate tools and procedures for sea assessment of biological rates such as spawning, growth, starvation mortality, predation mortality, and use and allocation of energy, (2) conduction of annual cruises designed to estimate these rates, and (3) analysis of these data and in cooperation with other Coastal Division staff the development of models that provide estimates of biomass and population dynamics based on the data collected at sea.

C. PRODUCT/SERVICES: We produce two classes of products: (1) parameter estimates and models program of the Center for biomass estimates and Recreational Fisheries Research Management coast groundfish and wetfish stocks and for incorporation in management plans for west fishery scientists in other NMFC Centers, (2) development of new methodologies and concepts used by available through scientific publication and presentation. For example, this task has played a leading international role in recruitment research and ichthyoplankton biomass assessment.

D. CLIENTS: Models and population assessments produced by the task will be used by various fishery management teams including Fishery Management Plan Teams, the Pacific Management Council, California Department of Fish and Game, and other state management groups.

E. CONTRACTS: Production of histological slides of fish ovaries collected on NMFS surveys (\$5K). Private microtechnique vendors are used.

FORM II

NOAA/NMFS

CYOP - RESOURCE SUMMARY

DATE	10/29/87	
FMC	REF.NO.	PAGE
SWC	001	2 of 4

TITLE ☐ Population Biology of Coastal E. Pacific FishesHQ CONTACT(S) ☐

TASK NAMES	TASK#1	TASK#2	TASK#3	TASK#4	TOTALS
OBJECT CLASS	8L1A3AAO				
DIRECT LABOR	383.1				
PERS.BENEFITS	61.3				
TRAVEL	6.0				
TRANSPORTATION					
RENT,COMM.,UTIL.	10.0				
PRINT/REPROD.					
CONTRACTS	5.0				
SUPPLIES/MATERIALS	22.0				
EQUIPMENT					
GRANTS	10.0				
OTHER					
TOTALS	497.4				
FTE (FTP)	9.75				
FTE (OTFTP)	1.0				

VESSELS	
# SEA DAYS ALLOC.	
40	
NOAA	CHARTERS
40	0
COST OF CHARTERS	
--	
# FREE DAYS	
--	
CROSS REFERENCES	

FORM III

NOAA/NMFS

PERSONNEL SCHEDULE

FMC	REF.NO.	PAGE
SWC	001	3 of 4

#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
<u>FTP</u>					
1.	Reuben Lasker	Physiologist Res. Adm	GM 15/0	100%	8L1A3AA0
2.	John R. Hunter	Supv. Fish. Biologist	GM 15/0	100%	8L1A3AA0
3.	Nancy C.H. Lo	Mathematical Statistician	GS 13/5	100%	8L1A3AA0
4.	Robert W. Owen	Oceanographer	GS 13/7	8%	8L1A3AA0
5.	Alice Theilacker	Fishery Biologist (R)	GS 12/6	75%	8L1A3AA0
6.	Roderick Leong	Fishery Biologist (R)	GS 11/9	100%	8L1A3AA0
7.	John L. Butler	Fishery Biologist (G)	GS 9/7	100%	8L1A3AA0
8.	Carol Kimbrell	Fishery Biologist (R)	GS 9/6	100%	8L1A3AA0
9.	Eric A. Lynn	Biol. Tech. Microbiol.	GS 9/5	100%	8L1A3AA0
10.	Diane Forsythe	Secretary	GS 6/7	100%	8L1A3AA0
11.	Beverly Macewicz	Biol. Tech. Microbiol.	GS 9/4	100%	8L1A3AA0
<u>OTHER</u>					
12.	Carlos Vedovato	Computer Asst.	GS 4/1	50%	8L1A3AA0
13.	Mark Drawbridge	Biol. Tech.	GS 4/1	50%	8L1A3AA0

FORM 1
PLAN SUMMARY

NOAA/NMFS

APPROVAL SIGNATURE



TITLE

PRIN. FAC.

FTE

\$K

UNIT LEADER

LINE ITEM NAME

Fisheries & Environment Invest.

La Jolla, CA

6.0

254.6

R.M. Laurs

A. PROBLEM STATEMENT/OBJECTIVE:

This is a comprehensive, multidisciplinary task to conduct studies on the distribution, availability, and migration patterns of North Pacific albacore and associated environmental influences in the eastern North Pacific and on the ecology of selected coastal pelagic and groundfishes in the California Current region.

B. METHODOLOGY/APPROACH:

The ecosystems approach is followed in these studies to evaluate fish-ocean relationships which are a necessary part of an albacore resource management model being developed in cooperation with other elements of SWFC. Some of these studies will be conducted in cooperation with the albacore industry including albacore fishery-oceanography research. Computer models will be developed on growth, migration, and changes in distribution of albacore in response to environmental changes. There will be laboratory analysis of otoliths for age determination. Improvements in catch statistics will be promoted and fish tagging experiments conducted in cooperation with fishermen's organizations. The task will assume a leading role in the expanding application of satellite remote-sensing to the understanding of fish distribution and availability.

C. PRODUCT/SERVICES:

Scientific articles published in marine science literature; written and oral reports of research findings issued to the fishing industry, recreational fishermen, and general public.

D. CLIENTS: Users of products and research are the U.S. albacore commercial and recreational fishermen and industry buyers and canners. These products help to improve efficiency of operations, improve yields, and save fuel. Knowledge gained by this research will influence judgments in Pacific Fishery Management Councils and the Scientific and Statistical Committee in negotiations with other nations involved in west coast fisheries.

E. CONTRACTS:

None

FMC

REF.NO.

PAGE

SWC

004

1 of 5

FORM II

NOAA/NMFS

CYOP - RESOURCE SUMMARY

DATE	10/29/87	
FMC	REF.NO.	PAGE
SWC	004	2 of 5

TITLE ☐

Fisheries Environment Investigation

HQ CONTACT(S) ☐TASK NAMES ☐

OBJECT CLASS

DIRECT LABOR

PERS.BENEFITS

TRAVEL

TRANSPORTATION

RENT,COMM.,UTIL.

PRINT/REPROD.

CONTRACTS

SUPPLIES/MATERIALS

EQUIPMENT

GRANTS

OTHER

TOTALS ☐

FTE (FTP)

FTE (OTFTP)

TASK#1
8L1A48E0

207.6

33.2

3.0

2.0

4.8

2.0

2.0

254.6

5.0

1.0

TASK#2

TASK#3

TASK#4

TOTALS

207.6

33.2

3.0

2.0

4.8

2.0

2.0

254.6

5.0

1.0

VESSELS

SEA DAYS ALLOC.

NOAA

CHARTERS

COST OF CHARTERS

FREE DAYS

CROSS REFERENCES

FORM III

NOAA/NMFS

PERSONNEL SCHEDULE

FMC	REF.NO.	PAGE
SWC	004	3 of 5

#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
<u>FTE</u>					
1.	R. Michael Laurs	Supv. Res. Oceanographer	GM 14/0	100%	8L1A4BEO
2.	Ronald J. Lynn	Oceanographer	GM 13/0	100%	8L1A4BEO
3.	Robert Nishimoto	Fishery Biologist (R)	GS 11/5	100%	8L1A4BEO
4.	Kenneth A. Bliss	Oceanographer	GS 11/5	100%	8L1A4BEO
5.	Ronald C. Dotson	Fishery Biologist (G)	GS 9/4	100%	8L1A4BEO
<u>OTHER</u>					
6.	Mark Hess	Biological Tech.	GS 5/1	100%	8L1A4BEO

FORM IV

NOAA/NMFS

MILESTONE ARRAY

FMC	REF.NO.	PAGE
SWC	004	4 of 5

TASK#	S E Q	M A E	MAJOR MILESTONES, ACTIVITIES, AND EVENTS	FY 88					FY 89					FY 90				
				1	2	3	4	1	2	3	4	1	2	1	2	3	4	5
RL1A9100	1	A	Conduct satellite studies in support of groundfish and other fishery research															
"	2	A	Investigate use of satellite data to determine optimal time of hatchery release of salmon smolts to improve survival															
8LLA4BEO	3	A	Provide oceanographic support for groundfish research															
"	4	A	Develop model of North Pacific albacore migration by age															
"	5	M	Complete MS on vertical distribution/thermal structure relationship of North Pacific albacore															
"	6	M	Complete investigation of North Pacific albacore age and growth and provide report															
"	7	A	Complete report on tagging methods and tag and release data base															
"	8	M	Issue seasonal forecast for North Pacific albacore															
"	9	A	Conduct fishery advisory operations including biweekly fish bulletins and daily albacore fishing broadcasts															
"	10	A	Develop environmental/fishery relationship indices for use in albacore model (part in collaboration with PFEG)															
"	11	A	Make counts of daily ring measurements for age and growth of South Pacific albacore.															

(continued)

NOAA/NMFS

NOAA/NMFS

FMC	REF.NO.	PAGE
SWC	004	5 of 5

[illegible]

FORM I

PLAN SUMMARY

NOAA/NMFS

FMC	REF. NO.	PAGE
SWC	8	1 of 4

APPROVAL SIGNATURE

TITLE

PRIN. FAC.

SWC-La Jolla

FTE

\$K

UNIT LEADER

Holt, R.

LINE ITEM NAME

Resource Information

ETP Dolphin Monitoring

SWC-La Jolla

6.4

265.3

Holt, R.

Resource Information

A. PROBLEM STATEMENT/OBJECTIVE: This task is one of seven (SWC 8, 11, 12, 15, 57, 97, 98) closely linked tasks involving Research on dolphins associated with the eastern tropical Pacific (ETP) tuna fishery. It provides information on biological impacts of management practices to NMFS as mandated by the Marine Mammal Protection Act (MMPA). Recent Congressional action reauthorization of the MMPA, specified a monitoring program to determine trends in dolphin populations over a long sampling period of 5 years or more. This task is responsible for producing the experimental design to be the monitoring program and a series of annual surveys using NOAA research vessels and a aircraft. It specifies data to be collected and, after they have been collected, analyzes these data to determine trends in dolphin abundance and to evaluate possible causes for the trends.

B. METHODOLOGY/APPROACH: The main focus of the task in FY88 is to conduct research ship surveys of ETP dolphins, participate in data collection, complete data analyses and present findings. This will include completing analyses of data collected during 1986, and 1987 completing the experimental design for use of a ship-based helicopter in 1987 to monitor stocks, completing computer programs for data analyses and establishing procedures for reviewing results before release to the general public. In addition, the task will compare two methods of monitoring population change by comparing data from tuna vessels with data from research vessels. Finally, this task will provide advice to the Southwest Region on dolphin mortality estimates.

C. PRODUCTS/SERVICES: Products of the task are used by NMFS offices charged with drafting management measures for the U.S. tuna fishery in the ETP.

D. CLIENTS: At least 5 years of data are required to detect a significant decline in the population with 95% confidence using data analyzed by this task. The information generated is used by NMFS to evaluate management options for protection of the ETP dolphin stocks as prescribed by the MMPA and for management of the annual U.S. fishery for tuna in the ETP. Up-to-date information on the condition of the dolphin populations is a key requirement for evaluating and selection of an option.

E. CONTRACTS:

FORM II

CYOP - RESOURCE SUMMARY

NOAA/NMFS

DATE	14 Oct 87	
FMC	REF.NO.	PAGE
SWC	8	2 of 4

TITLE

ETP Dolphin Monitoring

HQ CONTRACT(S)

TASK NAMES	ETP	Admin.	TASK#1	TASK#2	TASK#3	TASK#4	TOTALS
OBJECT CLASS	Dolphins						
	8L1C4VA1	8L1C4VA2					
DIRECT LABOR	126.8	70.4					197.2
PERS.BENEFITS	20.3	11.3					31.6
TRAVEL	2.0	2.0					4.0
TRANSPORTATION							
RENT, COMM., UTIL.							
PRINT/REPROD.							
CONTRACTS	2.4	2.0					4.4
SUPPLIES/MATERIALS	2.5	5.0					7.5
EQUIPMENT	2.5	4.5					7.0
GRANTS							
OTHER	10.0	3.6					13.6
TOTALS	166.5	98.8					265.3
FTE (FTP)	2.0	2.0					4.0
FTE (OTFTP)	4.4	0.0					6.4

VESSELS

SEA DAYS ALLOC.

NOAA CHARTERS

COST OF CHARTERS

FREE DAYS

CROSS REFERENCES

FORM III

PERSONNEL SCHEDULE

NOAA/NMFS

FMC	REF.NO.	PAGE
SWC	8	3 of 4

#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
	Holt, R.	Oper. Res. Analyst	GM/14	100	8L1C4VA1
	Sexton, S.	Oper. Res. Analyst	GS/7/3	100	8L1C4VA1
	DeMaster, D.	Wildlife Biologist	GM/15	100	8L1C4VA2
	Ratcliffe, C.	Secretary	GS/5/1	100	8L1C4VA2

FORM IV

FORM IV

FORM IV

FORM IV

FORM IV

APPROVAL SIGNATURE				
TITLE	PRIN. PAC.	FTE	\$K	UNIT LEADER
Biological Systems	SWC-La Jolla	6.5	239.3	Dizon, A.
				LINE ITEM NAME
				Resource Information

- A. PROBLEM STATEMENT/OBJECTIVE:** The primary objectives of this program are to determine the stock structure of mammal populations affected by U.S. fisheries and to use trends in various life history parameters to determine if these stocks are increasing or not. The work is focused primarily on ETP dolphins and harbor porpoise and harbor seal populations off the coast of California.
- B. METHODOLOGY/APPROACH:** Specifically, this year we are studying how sex ratios and other reproductive and physiological parameters respond to various levels of fishing pressure, population size, or forage density in the eastern tropical Pacific populations. Harbor porpoise reproductive parameters will also be determined. We will continue a study examining the stock discreteness of spotted dolphins and will complete a study on the spinner stock relatedness based on mtDNA. As in years past, we will process, curate, and archive dolphin life history data and specimens. Our estimates of reproductive rates and other vital rates; of indexes that reflect fishing pressure, density, or condition; and of stock structures are based primarily on specimens and data collected by NMFS & IATTC technicians aboard commercial seiners.
- C. PRODUCT/SERVICES:** The products are used, in conjunction with information on population size and density, to meet the mandated requirements of the Marine Mammal protection Act concerning the gathering of information for determination of "significantly impacted" and "impacted by whom or what" as well as the providing of mitigation advice to the Secretary.
- D. CLIENTS:** Products are used by other tasks in the Division (SWC 8 and 96) as well as other groups in NMFS and in the industry charged or involved with management measures for ETP U.S. tuna fishery or the California coastal fisheries.
- E. CONTRACTS:** ARGOS \$8.0 - Satellite tracking harbor seals.

FORM II

CYOP - RESOURCE SUMMARY

NOAA/NMFS

DATE | 14 Oct 87

FMC | REF.NO. | PAGE

SWC | 11 | 2 of 4

TITLE

Biological Systems

HQ CONTRACT(S)

TASK NAMES

OBJECT CLASS

TASK#1
8L1A5VU1

TASK#2

TASK#3

TASK#4

TOTALS

DIRECT LABOR

175.0

175.0

PERS.BENEFITS

28.0

28.0

TRAVEL

4.5

4.5

TRANSPORTATION

RENT, COMM., UTIL.

PRINT/REPROD.

CONTRACTS

8.0

8.0

SUPPLIES/MATERIALS

13.5

13.5

EQUIPMENT

5.3

5.3

GRANTS

OTHER

5.0

5.0

TOTALS

239.3

239.3

FTE (FTP)

4.5

4.5

FTE (OTFTP)

2.0

2.0

VESSELS

SEA DAYS ALLOC.

NOAA

CHARTERS

COST OF CHARTERS

FREE DAYS

CROSS REFERENCES

FORM III
PERSONNEL SCHEDULE

NOAA/NMFS

FMC	REF. NO.	PAGE
SWC	11	3 of 4

#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
	Dizon, A.	Fishery Biologist	GM/13	50	8L1A5VU1
				50	8L1A2AFB
	Myrick, A.	Wildlife Biologist	GS/12/6	100	8L1A5VU1
	Hohn, A.	Fishery Biologist	GS/11/4	100	8L1A5VU1
	Miller, R.	Biological Technician	GS/8/8	100	8L1A5VU1
	Akin, P.	Fishery Biologist	GS/7/5	100	8L1A5VU1

FORM I
PLAN SUMMARY

NOAA/NMFS

FMC	REF.NO.	PAGE
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APPROVAL SIGNATURE

TITLE

Tuna Vessel Observer Data

PRIN. FAC.

SWC-La Jolla

FTE

6.5

\$K

265.0

UNIT LEADER

Reilly, S.B.

LINE ITEM NAME

Resource Information

A. PROBLEM STATEMENT/OBJECTIVE: In addition to the research vessel surveys, the SWC will be evaluating dolphin encounter rate data collected by observers aboard tuna vessels for use as an index to changes in the relative abundance of ETP dolphins. The basic approach of the program is to define and identify various attributes of the fishery, describe the environmental features that affect dolphin distribution, and examine various subsampling and stratification schemes. In FY88 the primary emphasis of the program will be to complete a comprehensive analyses of tuna vessel searching effort, develop a model that can be used to test any proposed methodology in terms of precision and bias, and to summarize the influence of environmental variability on the distribution of dolphins.

B. METHODOLOGY/APPROACH: A systems approach will be employed to develop the model that will be used to evaluate the utility of TVOD in monitoring trends in ETP dolphins. After reviewing existing analyses to date, interviewing vessel captains and experienced observers, and summarizing what is known about the variability in dolphin distribution, a spatial-temporal dynamic model will be developed. Specific "population parameters" for tunas, dolphins and the tuna fleet and various environmental features will be simulated within the model. The simulated "observer data" generated by the model will then be analyzed with different methods to determine how well each method reproduces the "known" population trends.

C. PRODUCT/SERVICES: The data from the Tuna Vessel Observer Program will be used in combination with data from the Biology Program and from research vessels surveys (MOPS) to determine whether the relative number of dolphins in the ETP are increasing or decreasing, and if decreasing, to determine if the observed decline is at least in part related to the U.S. tuna fleet.

E. CLIENTS: Data will be used by SWC personnel to determine trends in the relative abundance of dolphin stocks that are incidentally taken by the U.S. tuna fisherman. In addition, the information will be used to determine whether the current level of take is adversely affecting any of the dolphin stocks. Final reports are submitted to the Southwest Regional Office and used to develop a strategy to manage ETP dolphins according to the intent of the Marine Mammal Protection Act.

E. CONTRACTS:

FORM II

CYOP - RESOURCE SUMMARY

NOAA/NMFS

DATE	14 Oct 87	
FMC	REF.NO.	PAGE
SWC	12	2 of 4

TITLE

Tuna Vessel Observer Data

HQ CONTRACT(S)

TASK NAMES	TVOD	TOPS	TASK#2	TASK#3	TASK#4	TOTALS
OBJECT CLASS	TASK#1	TASK#2				
	8L1A6AW1	8L1A6AW2				
DIRECT LABOR	155.6	42.4				198.0
PERS.BENEFITS	24.9	6.8				31.7
TRAVEL	6.6	5.0				11.0
TRANSPORTATION						
RENT, COMM., UTIL.						
PRINT/REPROD.						
CONTRACTS						
SUPPLIES/MATERIALS	5.7	1.0				6.7
EQUIPMENT	6.0	1.0				7.0
GRANTS						
OTHER	8.0	2.0				10.0
TOTALS	206.8	58.2				265.0
FTE (FTP)	2.0	1.0				3.0
FTE (OTFTP)	3.0	.5				3.5

VESSELS

SEA DAYS ALLOC.

NOAA | CHARTERS

COST OF CHARTERS

FREE DAYS

CROSS REFERENCES

FORM III
PERSONNEL SCHEDULE

NOAA/NMFS

FMC	REF.NO.	PAGE
SWC	12	3 of 4

#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
	Reilly, S.	Fishery Biologist	GM/13	100	8L1A6AW1
	Vetter, L.	Oper. Res. Analyst	GS/12/3	100	new 8L1A6AW2
	Oliver, C.	Fishery Biologist	GS/11/7	100	8L1A6AW1

FORM IV
MILESTONE ARRAY

FMC	REF. NO.	PAGE
SWC	12	4 of 4

FY 88 | 89

[illegible]

FORM I
PLAN SUMMARY

NOAA/NMFS

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SWC	015	1 of 5

APPROVAL SIGNATURE

TITLE

Senior Scientist Unit

PRIN. FAC.

SWFC-La Jolla

FTE

2.63

\$K

119.1

UNIT LEADER

W. Perrin

LINE ITEM NAME

Resource Information

A. PROBLEM STATEMENT/OBJECTIVE: The objective of this task is to determine impacts of fisheries and other human activities on cetacean populations. This research helps make possible rational management and consumption of cetaceans at national and international levels.

B. METHODOLOGY/APPROACH: Research will continue on systematics and other aspects of population biology of cetaceans, to identify populations, assess status and determine fishery interactions. Heavy use is made of specimens and data collected by observers aboard U.S. tuna seiners in the ETP.

C. PRODUCT/SERVICES: The principal product is scientific advice (in form of reports, publications and memoranda).

D. CLIENTS: The main clients are the regional Scientific Director and Regional Director within NMFS and the MMC, IWC and IUCN.

E. CONTRACTS: None (other than work-study student from UCSD).

FORM II

CYOP - RESOURCE SUMMARY

NOAA/NMFS

DATE			
FMC	REF.NO.	PAGE	
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TITLE

Senior Scientist Unit

HQ CONTRACT(S)

TASK NAMES

OBJECT CLASS

TASK#1

8L1A5VP1

DIRECT LABOR

PERS.BENEFITS

TRAVEL

TRANSPORTATION

RENT, COMM., UTIL.

PRINT/REPROD.

CONTRACTS

SUPPLIES/MATERIALS

EQUIPMENT

GRANTS

OTHER

TOTALS

FTE (FTP)

FTE (OTFTP)

TASK#2

(VAX)

1.0

1.0

3.0

2.0

0

0

119.1

2.00

0.67

TASK#3

TASK#4

TOTALS

19.2

14.6

4.0

0.3

2.0

1.0

1.0

3.0

2.0

0

0

119.1

2.00

0.67

VESSELS

SEA DAYS ALLOC.

NOAA

CHARTERS

COST OF CHARTERS

FREE DAYS

CROSS REFERENCES

FORM III
PERSONNEL SCHEDULE

NOAA/NMFS

FMC	REF.NO.	PAGE
SWC	015	3 of 5

#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
1.	William F. Perrin	Supervisory Fishery Biologist	GM15	100	8L1A5VP1
2.	James M. Gilpatrick	Fishery Biologist	GS7/3-4	100	8L1A5VP1
3.	Carrie E. Wilson	Biological Technician	GS5/1	67	8L1A5VP1

FORM IV

NOAA/NMFS

MILESTONE ARRAY

FMC	REF.NO.	PAGE
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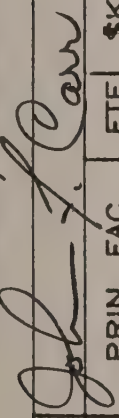
FY 88 89 90

TASK #	S	M	MAJOR MILESTONES, ACTIVITIES, AND EVENTS	1	2	3	4	1	2	1	2
8L1A5VP1		M	Report on world distribution of striped dolphin to press	N							
8L1A5VP1		E	Deliver paper on new pygmy spinner dolphin to MM Conference	D							
8L1A5VP1	1	A	Edit proceedings of Workshop on Biology and Conservation of Platanistoid Dolphins	X							
8L1A5VP1	2	M	Workshop proceedings to press (IUCN)	D							
8L1A5VP1	1	A	Make arrangements for meetings of IWC Scientific Committee, including special meeting on cetaceans and gillnets	X	X	X	X	X	X	X	X
8L1A5VP1	2	E	Meetings of IWC Scientific Committee (La Jolla and Monterey) and workshop on cetaceans and gillnets			M		N	M		
8L1A5VP1		M	IUCN Cetacean Specialist Group Action Plan published	J							
8L1A5VP1	1	A	Complete collection of data for review of ETP dolphin stocks	M							
8L1A5VP1	2	A	Analyze data for review	X	X						
8L1A5VP1	3	M	Complete review of morphology of ETP dolphin stocks			S					
8L1A5VP1		A	Cooperative research on population systematics with Soviets	X	X	X	X	X	X	X	X
8L1A5VP1		A	International advisory work (IWC, IUCN, CMS, US/USSR)	X	X	X	X	X	X	X	X

FORM 1 PLAN SUMMARY

NOAA/NMFS

FMC	REF.NO.	PAGE
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APPROVAL SIGNATURE	PRIN. FAC.	FTE	\$K	UNIT LEADER	LINE ITEM NAME
 TITLE Ecology & Systematics of Fishes	La Jolla, CA	5	205.9	H.G. Moser	

A. PROBLEM STATEMENT/OBJECTIVE: The primary goal is to produce data and analyses that lead to a comprehensive understanding of the fish stocks of the California Current region in relation to their environment. Plankton surveys provide information on distribution abundance, reproduction, spawning stock biomass, mortality, and recruitment of fish stocks along with associated oceanographic factors. A major goal is to determine how fluctuations in abundance and distribution of fish stocks are related to oceanographic flux and predator-prey interactions.

B. METHODOLOGY/APPROACH: Samples of fish eggs and larvae from historical and current plankton survey and trawl cruises are utilized to produce data for this task. Approximately 300 taxa of fishes are represented in these samples. Processing involves the identification, enumeration, measurement, staging, and computer entry. Resultant data is subjected to time series and community analyses leading to the formulation of ecosystem models.

C. PRODUCT/SERVICES: (1) data reports on the distribution and abundance of ichthyoplankton from California and Baja California from 1939 to the present, (2) time series summaries showing seasonal and interannual changes in abundance and distribution of major species, (3) ecological analyses that elucidate species interaction and environmental effects on abundance, (4) scientific publications on the early life history of fishes that range from papers on individual species and identification guides to comprehensive treatises, and (5) training courses on ichthyoplankton and techniques.

D. CLIENTS: Scientists in world-wide public and private institutions use our data, reports, and formal publications in their research on commercial, recreational, and ecologically important fish stocks and in formulating ecosystem models. Managers and councils use our information in establishing optimal harvest quotas and conserving territorial fish stocks. The fishing industry uses our information in determining areas of abundance of target species. Private consulting firms and conservation agencies use information in producing their reports. The task has a long-standing commitment to training professional biologists and the public.

E. CONTRACTS:

FORM II

NOAA/NMFS

CYOP - RESOURCE SUMMARY

TITLE



Ecology and Systematics of Fishes - CalCOFI

HQ CONTACT(S)



TASK NAMES



OBJECT CLASS

TASK #1
8L1A3AGO

TASK #2

TASK #3

TASK #4

TOTALS

DIRECT LABOR

166.4

PERS.BENEFITS

26.6

TRAVEL

1.3

TRANSPORTATION

0

RENT, COMM., UTIL.

5.0

PRINT/REPROD.

0

CONTRACTS

0

SUPPLIES/MATERIALS

3.0

EQUIPMENT

3.6

GRANTS

0

OTHER

0

TOTALS

205.9

FTE (FTP)

4

FTE (OTER)

1

DATE

10/29/87

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REF.NO.

PAGE

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018

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VESSELS

SEA DAYS ALLOC.

NOAA

CHARTERS

77 (CFRD)

COST OF CHARTERS

FREE DAYS

CROSS REFERENCES

FORM III

NOAA/NMFS

PERSONNEL SCHEDULE

FMC	REF.NO.	PAGE
SWC	018	3 of 5

#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
1.	H. Geoffrey Moser	Supv. Fishery Biologist	GM 14/0	100%	8L1A3AGO
2.	Elizabeth Stevens	Fishery Biologist	GS 11/5	100%	8L1A3AGO
3.	David A. Ambrose	Fishery Biologist	GS 11/1-2	100%	8L1A3AGO
4.	Elaine M. Acuna	Biological Tech.	GS 9/7-8	100%	8L1A3AGO
5.	Barbara S. MacCall	Fishery Biologist	GS 11/4	80%	8L1A3AGO

MILESTONE ARRAY

FMC	REF.NO.	PAGE
SWC	018	4 of 5

TASK#	S E Q	M A E	MAJOR MILESTONES, ACTIVITIES, AND EVENTS	FY 88	89	90
8L1A3AGO	1	M	Historical CalCOFI ichthyoplankton data base completed and made available to public (with Tasks 019 and 020)	1	2	3
"	2	E	Reports published for historical CalCOFI ichthyoplankton and station data from 1951 to 1981 (with Task 019)	x		
"	3	A	Ecological analysis of CalCOFI ichthyoplankton assemblages (with Task 020)	--x		
"	4	E	Identification, computer entry, and preparation of report on ichthyoplankton from 1984 CalCOFI Survey			x
"	5	A	Identification and analysis of CalCOFI surface (Manta) ichthyoplankton			
"	6	A	Identification guide to CalCOFI ichthyoplankton; areal and seasonal synopsis of fish taxa published (with Tasks 019 and 020)			x
"	7	E	Stage eggs for sardine and anchovy spawning biomass estimates			x
"	8	E	Groundfish assessment--data from 1987 cruise processed and analyzed; participate in planning, carrying out, and work-up of 1988 groundfish survey			x
"	9	A	Analysis of ichthyoplankton from various cruises (e.g., Eastern tropical Pacific Manta, vertical distribution, CalVet, Gulf of California, ocean fronts)			
			(continued)			

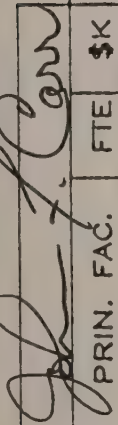
NOAA/NMFS

NOAA/NMFS

FMC	REF.NO.	PAGE
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[illegible]

FMC	REF.NO.	PAGE
SWC	019	1 of 5

APPROVAL SIGNATURE 

TITLE	PRIN. FAC.	FTE	\$K	UNIT LEADER	LINE ITEM NAME
Coastal & Pacific Fisheries Resource Investigation	La Jolla, CA	9.5	341.7	R.L. Charter	

A. PROBLEM STATEMENT/OBJECTIVE: This task provides the basic information required for the annual assessment of stocks supporting California coastal fisheries. This task provides the logistics in FY 88 for four California Cooperative Oceanic Fisheries Investigation (CalCOFI) cruises and one groundfish cruise.

B. METHODOLOGY/APPROACH: We will complete five ichthyoplankton survey cruises collecting over 1000 plankton samples. All of the data from these cruises and samples will be processed by the personnel of this task and cooperating people from the University of California's Scripps Institution of Oceanography. These data will be added to the CalCOFI historical time series. We will also be updating and improving the CalCOFI historical data bases (1951-1987). The Aerial Marine Resource Monitoring System (AMRS) data bases will also be updated as we get new data.

C. PRODUCT/SERVICES: The major products of this task are the CalCOFI data bases, the ARMS data base, and the newly acquired groundfish information. Major services include logistics for all Coastal Division cruises, data base management, and assistance in data analysis.

D. CLIENTS: The main clients will be the Pacific Fishery Management Council, Scripps Institution of Oceanography, and other NMFS Fishery Centers.

E. CONTRACTS: Aerial Spotter Contract (\$13.1K) is let for data collection for the Aerial Marine Resource Monitoring System.

FORM II
CYOP - RESOURCE SUMMARY

NOAA/NMFS

DATE	10/29/87	
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TITLE ☐ Coastal & Pacific Fisheries Resource Investigation

HQ CONTACT(S) ☐

TASK NAMES ☐	TASK#1	TASK#2	TASK#3	TASK#4	☐
OBJECT CLASS	TASK#1	TASK#2	TASK#3	TASK#4	TOTALS
DIRECT LABOR	8L1A6AHO 245.8				
PERS.BENEFITS	31.0				
TRAVEL	4.0				
TRANSPORTATION	.5				
RENT,COMM.,UTIL.	20.0				
PRINT/REPROD.	1.8				
CONTRACTS	21.6				
SUPPLIES/MATERIALS	14.0				
EQUIPMENT	3.0				
GRANTS	.0				
OTHER	.0				
TOTALS ☐	341.7				
FTE (FTP)	5				
FTE (OTFTP)	4.5				

VESSELS	
# SEA DAYS ALLOC.	
77	
NOAA	CHARTERS
77	0
COST OF CHARTERS	
# FREE DAYS	
30 - SIO	
CROSS REFERENCES	

PERSONNEL SCHEDULE

FMC	REF.NO.	PAGE
SWC	019	3 of 5

#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
<u>FTE</u>					
1.	Richard L. Charter	Supv. Computer Programmer Analyst	GS	12/3	100% 8L1A6AHO
2.	William C. Flerx	Fishery Biologist (R)	GS	11/2	100% 8L1A6AHO
3.	Cindy Meyer	Computer Programmer	GS	11/1	100% 8L1A6AHO
4.	Dimitry Abramenkoff	Fishery Biologist	GS	7/8	100% 8L1A6AHO
5.	Susan Taveras	Biological Tech.	GS	5/1	100% 8L1A6AHO
<u>FTP</u>					
6.	Lucy Dunn	Biological Tech.	GS	5/1	100% 8L1A6AHO
7.	Mary Farrell	Biological Tech.	GS	5/1	100% 8L1A6AHO
8.	Alice Lumpkins	Biological Tech.	GS	5/1	100% 8L1A6AHO
9.	Jeanne Haddox	Biological Tech.	GS	5/1	100% 8L1A6AHO
<u>OTHER</u>					
10.	Amy Hays (student)	Biological Aid	GS	3/1	50% 8L1A6AHO

NOAA/NMFS

MAJOR MILESTONES, ACTIVITIES, AND EVENTS

FMC	REF.NO.	PAGE
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TASK#	S E Q	M A E	MAJOR MILESTONES, ACTIVITIES, AND EVENTS	FY 88	89	90
8L1A6AH0	1	E	Prepare clearance requests for scientific collecting in foreign seas, e.g., Mexico, if needed.	1	2	3
"	2	A	Maintain close liaison with captain and crew of ships of cooperative agencies	J	x	x
"	3	A	Maintain AMRMS (aerial survey) data base	-	-	-
"	4	A	Assist in design and development of data management system for groundfish data	-	-	-
"	5	A	Sorting of plankton samples from groundfish & CalCOFI cruises for major species	J	x	x
"	6	E	Enter and edit all data and sorting results pertinent to the biomass estimates	-	-	-
"	7	A	Edit all data collected at sea: correct all errors, enter into CalCOFI and groundfish data bases	A	J	x
"	8	A	Design cruise patterns, establish activities, prepare cruise announcements and reports	-	-	-
"	9	A	Ready all seagoing equipment for cruises; design and construct experimental gear	-	-	-
"	10	A	Maintain close liaison with captain and crew of R/V David Starr Jordan and other research vessels	-	-	-
"	11	A	Implement and use shipboard computer system to allow transfer of digitized CalBOBL and Manta tow data, captain's logs and station logs to SWFC on IBM PC compatibles	-	-	-
			(continued)			

(continued)

NOAA/NMFS

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PLAN SUMMARY

NOAA/NMFS

FMC	REF.NO.	PAGE
SWC	020	1 of 4

J. L. Carr

APPROVAL SIGNATURE

TITLE

PRIN. FAC.

FTE

\$K

UNIT LEADER

LINE ITEM NAME

Survey Systems Development & Eval.

La Jolla, CA

4.65

146.0

Paul E. Smith

A. PROBLEM STATEMENT/OBJECTIVE: Certain categories of fishery resources require direct estimation of abundance independent of fishery monitoring. Our objectives are to design, conduct, and monitor these abundance estimation surveys and collect ancillary environmental data in time series to interpret population changes.

B. METHODOLOGY/APPROACH: We specify survey designs to collect accurate, precise, inclusive, and representative data on fish population size and spawning area using data on the abundance, production, survival, and dispersal of fish eggs and larvae. In part, these survey designs are to maintain continuity with surveys of past decades so that long-term chronic declines can be evaluated as well as more rapid declines and population recoveries. We also archive and dispense data on ocean climatology and collections of biological, physical, and chemical oceanography from the same ecosystem.

C. PRODUCT/SERVICES: Our main products are documented sets of data for scientists or documented summaries of data for managers.

D. CLIENTS: Users include regional fishery management groups, e.g., NMFS and California Department of Fish and Game which manage fish stocks off California and foreign countries with similar problems and species.

E. CONTRACTS: None

NOAA/NMFS

10/29/87

ON THE

020

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Survey Systems Development and Evaluation



VESSELS	
# SEA DAYS ALLOC.	
NOAA	CHARTERS
COST OF CHARTERS	
# FREE DAYS	
CROSS REFERENCES	
018	

FORM III

NOAA/NMFS

PERSONNEL SCHEDULE

FMC	REF.NO.	PAGE
SWC	020	3 of 4

#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
1.	Paul E. Smith	Fish. Biologist (R)	GM	100%	8L1A6AJ0
2.	Laurence E. Eber	Oceanographer	GS	100%	8L1A6AJ0
3.	Natalie Boyer	Biological Aid	GS	40%	8L1A6AJ0

FORM IV

NOAA/NMFS

MILESTONE ARRAY

FMC	REF.NO.	PAGE
SWC	020	4 of 4

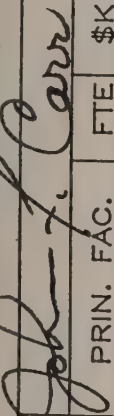
TASK#	S E Q	M A E	MAJOR MILESTONES, ACTIVITIES, AND EVENTS	FY 88 89 90			
				1	2	3	4
8L1A6AJ0	1	A	Documentation and evaluation of procedures for fishery independent inventory of Dover sole and sablefish (see 001/2)	1	2	3	4
"	2	A	Documentation and evaluation of procedures for fishery independent inventory of Pacific sardine and Spanish sardine	-	-	-	-
"	3	A	Technology transfer of procedure for Pacific sardine biomass estimates	-	-	-	-
"	4	A	Technology transfer of procedure for Spanish sardine biomass estimates	-	-	-	-
"	5	E	Complete quantitative analysis of California Current Fish Recurrent Groups (CCFRG) 1954-60 (w/Moser & Eber)	x			
"	6	A	Begin analysis of 1951-53, 1961-69 CCFRG (w/Moser & Eber)	-	-	-	-
"	7	A	Begin analysis of 1972-79 CCFRG (w/Moser, Eber & Charter)	-	-	-	-
"	8	A	Evaluate change in procedures of CalCOFI with reference to groundfish species	-	-	-	-
"	9	A	Evaluate change in procedures of CalCOFI with reference to pelagic species	-	-	-	-

FORM 1

PLAN SUMMARY

NOAA/NMFS

FMC	REF.NO.	PAGE
SWC	021	1 of 4

APPROVAL SIGNATURE 

TITLE

Pelagic Stock Assessment Program

PRIN. FAC.

Honolulu Lab.

FTE

3.0

UNIT LEADER

J. A. Wetherall

LINE ITEM NAME

Information Analysis and Dissemination

A. PROBLEM STATEMENT/OBJECTIVE: The program's broad goal is to improve the scientific basis for pelagic resource stock assessment in the Pacific Oceanic Ecosystems. Program biologists and statisticians develop and apply mathematical estimation procedures and analytical tools useful in a wide range of situations. However, they focus on problems of tuna stock assessment in the North Pacific and South Pacific Transition Zone Subecosystems. Currently, emphasis is placed on assessment of yield potentials and fishery interactions in the South Pacific albacore fishery, and estimation of by-catch levels and entanglement impacts in the North Pacific squid drift gillnet fisheries of Japan, Taiwan, and the Republic of Korea. The North Pacific squid driftnet work is done in collaboration with the Northwest and Alaska Fisheries Center. The program also provides analytical support for annual assessments of the nesting population of Hawaiian green sea turtles.

B. METHODOLOGY/APPROACH:

During FY-88 the program will organize an international workshop to review the oceanography and biology of the North Pacific Transition Zone Subecosystem, and develop cooperative strategies for estimation of squid gillnet by-catch levels and assessment of entanglement impacts. The program will also estimate first-cut yield potentials for the developing South Pacific albacore surface fishery, and study North Pacific albacore fishery interactions. The South Pacific albacore data base will be compiled, documented, and exchanged with cooperating nations. The program will collaborate in production of a South Pacific albacore Management Information Document. The program will analyze the survey statistics from the annual green sea turtle census of East Island, French Frigate Shoals.

C. PRODUCT/SERVICES: During FY-88 the program will publish the proceedings of the North Pacific Transition Zone Squid Driftnet workshop; issue a yield assessment report for South Pacific albacore; distribute an inventory and description of the South Pacific albacore data base; issue the annual East Island green sea turtle nesting population estimate; contribute to the South Pacific albacore Management Information Document.

D. CLIENTS: The program supports needs of NMFS policy makers and negotiators in the area of international tuna fishery management and driftnet entanglement impacts; it expands knowledge of tuna stock assessment and quantitative analysis in the scientific community; it assists in monitoring efforts for the threatened population of Hawaiian green sea turtles; it contributes to development of U.S. and Pacific island participation in the South Pacific albacore fishery.

E. CONTRACTS:

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FORM II

NOAA/NMFS

CYOP - RESOURCE SUMMARY

DATE	October 20, 1987	
FMC	REF.NO.	PAGE
SWC	021	2 of 4

TITLE	▷	Pelagic Stock Assessment Program
HQ CONTACT(S)	▷	

TASK NAMES▷	TASK#1	TASK#2	TASK#3	TASK#4	▽
OBJECT CLASS	TASK#1	TASK#2	TASK#3	TASK#4	TOTALS
	8LIC5ACO				
DIRECT LABOR	127.0				127.0
PERS.BENEFITS	17.2				17.2
TRAVEL	4.2				4.2
TRANSPORTATION	--				--
RENT,COMM.,UTIL.	--				--
PRINT/REPROD.	--				--
CONTRACTS	--				--
SUPPLIES/MATERIALS	5.0				5.0
EQUIPMENT	--				--
GRANTS	--				--
OTHER	--				--
TOTALS▷	153.4				153.4
FTE (FTP)	2.0				2.0
FTE (OTFTP)	1.0				1.0

VESSELS	
# SEA DAYS ALLOC.	
0	
NOAA	CHARTERS
COST OF CHARTERS	
# FREE DAYS	
CROSS REFERENCES	

FORM III

NOAA/NMFS

PERSONNEL SCHEDULE

FMC	REF.NO.	PAGE
SWC	021	3 of 4

#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
1	Jerry A. Wetherall	Supervisory Fishery Biologist Research	GM/14/00	100.00%	8LIC5AC0
2	Marian Y. Yong	Mathematician	GS/11/09	100.00%	8LIC5AC0
3	Shigeru Yano	Res. Lab. Mechanic	WG/05/01	100.00%	8LIC5AC0

FORM IV

NOAA/NMFS

FMC	REF.NO.	PAGE
SWC	021	4 of 4

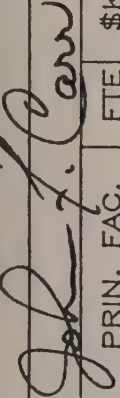
MILESTONE ARRAY

			FY 88 89 90											
TASK#	SEQ	MAE	MAJOR MILESTONES, ACTIVITIES, AND EVENTS											
8LLC5AC0	1	M	Report on international North Pacific Transition Zone squid driftnet workshop	1	2	3	4	1	2	1	2			
	2	E	Report estimates of North Pacific albacore by-catch in squid drift nets			M								
	3	E	Publish driftnet workshop proceedings				S							
	4	E	Report results of satellite tracking experiments to study movement of derelict drift gill nets											
	5	M	Report on NOAA ship survey of North Pacific squid gillnet grounds						S			S	S	
	6	M	Report on model of North Pacific driftnet impacts based on synoptic ocean surveys and analysis of commercial by-catch statistics										S	
	7	M	Report first-cut estimates of South Pacific albacore surface fishery yield potential					S						
	8	A	Compile and distribute South Pacific albacore data; inventory data base; establish sampling protocols											
	9	M	Issue South Pacific albacore Management Information Document [with La Jolla Laboratory]			J--A								
	10	A	Analysis of North and South Pacific albacore growth via otoliths				S							
	11	E	Report improved model of North Pacific albacore stock structure and age composition	0									S	
	12	A	Develop experimental designs for South Pacific albacore migration modeling					J----	N					

FORM 1 PLAN SUMMARY

NOAA/NMFS

FMC	REF.NO.	PAGE
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APPROVAL SIGNATURE 	PRIN. FAC.	FTE	\$K	UNIT LEADER	LINE ITEM NAME
	Honolulu Lab	2.8	142.8	R. A. Skillman	Information Analysis and Dissemination
TITLE					
Pelagic FMP Research Program					

A. PROBLEM STATEMENT/OBJECTIVE: The program's broad goal is to improve the scientific basis for management of fisheries administered under the WPRFMC's Management Plan for Pelagic Fisheries of the Western Pacific Region. The species affected include billfishes, mahimahi, wahoo, and some sharks occurring in the Central and Western Tropical Pacific Pelagic Subecosystem. An effective Pelagics FMP depends on our development of a firm biological foundation for guidance on problems of stock assessment, yield estimation, harvest policy analysis, and fishery interaction.

B. METHODOLOGY/APPROACH: During FY-88 the program will collect biological data and operational statistics from pelagic fisheries in the region, carry out oceanographic surveys, conduct biological experiments at sea and in the laboratory and assemble environmental data from oceanographic data bases to model the population dynamics of key Pelagic FMP Species. Models will be developed for age and growth, reproductive biology, larval distribution, and stock heterogeneity. Stock assessments will be completed for blue marlin and striped marlin. Biological data on wahoo will be assembled and published. Framework models for population dynamics of wahoo and mahimahi will be constructed. Fishery and stock data for all species will be summarized and reported in an annual Management Information Document. The program leader will serve as chairman of the WPRFMC's Pelagics Management Plan Monitoring Team.

C. PRODUCT/SERVICES: During FY-88 the program will produce and distribute the Management Information Document; stock assessment and stock identity papers for publication in the 1988 Billfish Symposium proceedings; a synopsis of wahoo data for publication.

D. CLIENTS: The program supports management planning by the WPRFMC, contributes to policy analysis by NMFS, and informs the public on matters of pelagic resource utilization and conservation.

E. CONTRACTS: A \$1K contract will be let in the private sector or academia for special preparation of biological materials needed for modeling growth and reproduction.

FORM II NOAA/NMFS

CYOP - RESOURCE SUMMARY

DATE	October 20, 1987	
FMC	REF.NO.	PAGE
SWC	022	2 of 4

TITLE	▷	Pelagic FMP Research Program
-------	---	------------------------------

HQ CONTACT(S)	▷	
---------------	---	--

TASK NAMES▷	TASK#1	TASK#2	TASK#3	TASK#4	▽
OBJECT CLASS	8L1C2A00				TOTALS
DIRECT LABOR	119.3				119.3
PERS.BENEFITS	14.8				14.8
TRAVEL	2.5				2.5
TRANSPORTATION	--				--
RENT,COMM.,UTIL.	--				--
PRINT/REPROD.	--				--
CONTRACTS	1.0				1.0
SUPPLIES/MATERIALS	4.2				4.2
EQUIPMENT	1.0				1.0
GRANTS	--				--
OTHER	--				--
TOTALS▷	142.8				142.8
FTE (FTP)	2.8				2.8
FTE (OTFTP)					

VESSELS	
# SEA DAYS ALLOC.	
29	
NOAA	CHARTERS
29	
COST OF CHARTERS	
# FREE DAYS	
CROSS REFERENCES	

PERSONNEL SCHEDULE

FMC	REF.NO.	PAGE
SWC	022	3 of 4

#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
FTP					
1	Robert A. Skillman	Supervisory Fishery Biologist Research	GM/13/00	100.00%	8L1C2A00
2	James H. Uchiyama	Supervisory Fishery Biologist Research	GS/11/07	100.00%	8L1C2A00
PTP					
3	Jeffrey D. Sampaga	Biological Laboratory Technician	GS/05/05	80.00%	8L1C2A00*
				20.00%	8L1A41L2

NOAA/NMFS

NOAA/NMFS

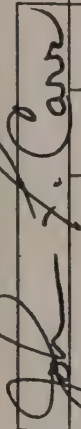
FMC	REF.NO.	PAGE
SWC	022	4 of 4

TASK#	S E Q	M A E	MAJOR MILESTONES, ACTIVITIES, AND EVENTS	FY 88	89	90
8L1C2A00	1	A	Collect, compile, and analyze fishery statistics and biological data	1	2	3
	2	A	Develop and test models of stock dynamics for mahimahi, wahoo, and other Pelagic FMP Species	4	1	2
	3	A	Survey and analysis of Pelagic FMP Species reproduction and larval distribution in Hawaiian waters [Cromwell cruises]	1	2	3
	4	M	Issue stock assessment report for blue and striped marlin [1988 Kona Billfish Symposium]	4	1	2
	5	E	Complete marlin stock identification paper [1988 Kona Billfish Symposium]	3	4	1
	6	M	Issue annual Management Information Document on Pelagic FMP Species	1	2	3
	7	E	Issue synopsis of biological information and fishery statistics for central and western Pacific wahoo	4	1	2
	8	E	Report on population dynamics and stock heterogeneity in Hawaiian mahimahi and wahoo stocks	1	2	3
	9	E	Report on integrated market sampling and fishery monitoring program for Pelagic FMP Species	4	1	2

FORM I
PLAN SUMMARY

NOAA/NMFS

FMC	REF.NO.	PAGE
SWC	025	1 of 5

APPROVAL SIGNATURE 

TITLE	PRIN. FAC.	FTE	\$K	UNIT LEADER	LINE ITEM NAME
Pelagic Ecosystems Program	Honolulu Lab.	4.3	182.9	C. H. Boggs	Information Analysis and Dissemination

A. PROBLEM STATEMENT/OBJECTIVE: The program's broad goal is to improve the scientific basis for management of tropical tuna fisheries in the Central and Western Tropical Pacific Pelagic Subecosystem. The species of concern include skipjack tuna, yellowfin tuna, bigeye tuna, and other components of the pelagic ecosystem. An effective U.S. policy for tuna fishery management requires a firm biological foundation for guidance on problems of stock assessment, yield forecasting, harvest strategy, and fishery interaction.

B. METHODOLOGY/APPROACH: During FY-88 the program will collect biological data and operational statistics from tuna fisheries in the central and western Pacific, emphasizing the fisheries of Hawaii. It will conduct biological experiments at sea and in the laboratory, and assemble environmental data from oceanographic data bases to model the dynamics of tuna stocks and their habitat in the region. It will undertake biological sampling for models of age and growth, reproductive biology, recruitment and larval distribution. It will design a research program to model the effects of environmental processes (such as currents and temperature distribution) and geographical features (such as islands and banks) on population dynamics and resource availability. Preliminary models will be constructed by analysis of appropriate time series data and evaluation of current information on species habitats, behavior, and distribution. Empirical studies on tuna distribution dynamics will be undertaken through laboratory experiments and open ocean tracking of free-swimming tunas fitted with multi-function physiological sensors and ultrasonic transmitters.

C. PRODUCT/SERVICES: During FY-88 the program will issue the annual forecast of Hawaii skipjack tuna fishing conditions; issue the annual tuna Management Information Document; publish several papers on tuna movements in relation to environmental variables; complete 5-year plan for modeling of tuna habitat and distribution dynamics in Hawaii.

D. CLIENTS: The program's work contributes to policy analysis and tuna fishery negotiations by NMFS, assists fishery investment and development decisions by the U.S. fishing industry, and promotes international cooperation in tuna fisheries research and management.

E. CONTRACTS: --

FORM II

NOAA/NMFS

CYOP -- RESOURCE SUMMARY

DATE

October 20, 1987

FMC

REF.NO.

SWC

025

PAGE

2 of 5

TITLE



Pelagic Ecosystems Program

HQ CONTACT(S)



TASK NAMES



OBJECT CLASS

TASK#1
8L1A6AKO

TASK#2

TASK#3

TASK#4

TOTALS



DIRECT LABOR

148.6

PERS.BENEFITS

19.4

TRAVEL

2.4

TRANSPORTATION

--

RENT, COMM., UTIL.

--

PRINT/REPROD.

--

CONTRACTS

--

SUPPLIES/MATERIALS

12.5

EQUIPMENT

--

GRANTS

--

OTHER

--

TOTALS

182.9

FTE (FTP)

3.0

FTE (OTFTP)

1.3

VESSELS

SEA DAYS ALLOC.

0

NOAA

CHARTERS

COST OF CHARTERS

FREE DAYS

CROSS REFERENCES

PERSONNEL SCHEDULE

FMC	REF.NO.	PAGE
SWC	025	3 of 5

#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
FTP					
1	Christofer H. Boggs	Fishery Biologist Research	GS/11/02	100.00%	8L1A6AK0
2	Richard W. Brill	Supervisory Fishery Biologist	GS/12/06	100.00%	8L1A6AK0
3	Randolph K. Chang	Fishery Biologist General	GS/11/07	100.00%	8L1A6AK0
TEMPORARIES					
4	Peter G. Bushnell	Fishery Biologist Research	GS/07/01	25.00%	8L1A6AK0
5	Vacant	Biological Aid	GS/03/01	25.00%	8L1A6AK0
6	Vacant (vice Loux)	Biological Aid	GS/04/01	80.00%	8L1A6AK0

NOAA/NMFS

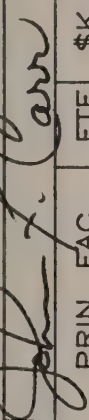
MAJOR MILESTONES, ACTIVITIES, AND EVENTS

TASK#	S E Q	M A E	MAJOR MILESTONES, ACTIVITIES, AND EVENTS	FY 88	89	90
8L1C6AKO	1	A	Collect, compile, and analyze fishery statistics and biological data	1	2	3
	2	A	Conduct appropriate field studies and laboratory experiments to test models of tuna population and distribution dynamics	4	1	2
	3	E	Issue annual forecast of Hawaii skipjack tuna fishing conditions	3	4	1
	4	E	Issue forecast of Hawaii yellowfin tuna fishing conditions	1	2	3
	5	M	Issue annual Management Information Document for tropical tunas [with Fishery Management Program]	J	J	J
	6	M	Complete 5-year research plan for modeling distribution, abundance, behavior and movements, and habitat of tunas around the Hawaiian Islands	S		
	7	E	Publish papers on effects of ambient oxygen levels on the distribution and movements of skipjack and yellowfin tuna	S		
	8	E	Publish papers on horizontal and vertical distribution of tunas associated with anchored fish aggregating devices	S		
	9	E	Report on new techniques for modeling behavior and habitat usage of free-swimming pelagic fishes by ultrasonic telemetry		S	
	10	M	Issue plan for cooperative study of yellowfin tuna dynamics around Hawaiian Islands and impact of insular subecosystem		S	
	11	E	Report on Hawaiian Islands tuna habitat model			S

FORM 1
PLAN SUMMARY

NOAA/NMFS

FMC	REF.NO.	PAGE
SWC	033	1 of 3

APPROVAL SIGNATURE 

TITLE

Honolulu Laboratory Management and Administration

PRIN. FAC.

Honolulu

FTE

8.0

\$K

395.6

UNIT LEADER

R. Shomura

LINE ITEM NAME

Management Fund

A. PROBLEM STATEMENT/OBJECTIVE:

B. METHODOLOGY/APPROACH:

C. PRODUCT/SERVICES: To provide overall administration of Honolulu Laboratory.

D. CLIENTS:

E. CONTRACTS: Contracting of janitorial and ground maintenance is required for the health and safety of our staff.

FORM II

NOAA/NMFS

CYOP - RESOURCE SUMMARY

DATE	Oct. 20, 1987		
FMC	REF.NO.	PAGE	
SWC	033	2 of 3	

TITLE ☐ Honolulu Laboratory Management and AdministrationHQ CONTACT(S) ☐

TASK NAMES	TASK#1	TASK#2	TASK#3	TASK#4	▽
OBJECT CLASS	TASK#1	TASK#2	TASK#3	TASK#4	TOTALS
	9WGN40H0				
DIRECT LABOR	255.5				255.5
PERS.BENEFITS	34.1				34.1
TRAVEL	9.0				9.0
TRANSPORTATION	11.0				11.0
RENT,COMM.,UTIL.	50.0				50.0
PRINT/REPROD.	0.0				0.0
CONTRACTS	25.0				25.0
SUPPLIES/MATERIALS	10.0				10.0
EQUIPMENT	0.0				0.0
GRANTS	0.0				0.0
OTHER	1.0				1.0
TOTALS ☐	395.6				395.6
FTE (FTP)	8.0				8.0
FTE (OTFTP)	0.0				0.0

VESSELS	
# SEA DAYS ALLOC.	
NOAA	CHARTERS
COST OF CHARTERS	
# FREE DAYS	
CROSS REFERENCES	

FORM III

NOAA/NMFS

PERSONNEL SCHEDULE

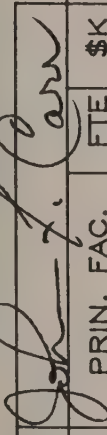
FMC	REF.NO.	PAGE
SWC	033	3 of 3

#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
1	Richard S. Shomura	Fishery Biologist Research Adm.	GM/15/00	100.00%	9WGN40H1
2	Carole A. Yukihiro	Secretary/Stenographer	GS/07/10	100.00%	9WGN40H1
3	Joseph T. Arakawa	Budget Analyst	GS/07/10	100.00%	9WGN40H2
4	Marylou Drake	Administrative Support Clerk	GS/05/10	100.00%	9WGN40H2
5	Karena S. Yee	Administrative Officer	GS/09/01	100.00%	9WGN40H2
6	Joseph W. Schulz	Travel Clerk	GS/04/01	100.00%	9WGN40H2
7	Jana L. Ramia	Editorial Clerk	GS/04/01	100.00%	9WGN40H2
8	Melvin J. Dutro, Sr.	Maintenance Mechanic	WG/07/02	100.00%	9WGN40H2

FORM I
PLAN SUMMARY

NOAA/NMFS

FMC	REF.NO.	PAGE
SWC	034	1 of 3

APPROVAL SIGNATURE 

TITLE
Tiburon Laboratory Management and Administration

PRIN. FAC.
Tiuborn, CA

UNIT LEADER
N.J. Abramson

LINE ITEM NAME

Management Fund

FTE
8.4

\$K
376.6

A. PROBLEM STATEMENT/OBJECTIVE:

Management and Administration of Tiburon Laboratory

B. METHODOLOGY/APPROACH:

C. PRODUCT/SERVICES:

D. CLIENTS:

E. CONTRACTS:

FORM II

NOAA/NMFS

CYOP - RESOURCE SUMMARY

DATE	10/20/87		
FMC	REF.NO.	PAGE	
SWC	034	2	of 3

TITLE

Tiburon Laboratory Management and Administration

HQ CONTACT(S)

TASK NAMES

OBJECT CLASS

DIRECT LABOR

PERS.BENEFITS

TRAVEL

TRANSPORTATION

RENT,COMM.,UTIL.

PRINT/REPROD.

CONTRACTS

SUPPLIES/MATERIALS

EQUIPMENT

GRANTS

OTHER

TOTALS

FTE (FTP)

FTE (OTFTP)

Mgmt. Fund
TASK#1
9WGN40T0

Mgmt. Fund
TASK#2
9WGN40T2

Mgmt. Fund
Library
TASK#3
9WGN40T3

Mgmt. Fund
Base Maint.
TASK#4
9WGN40T4

TOTALS

233.2

37.3

6.0

.5

46.0

.8

22.8

24.8

5.2

376.6

6.3

2.1

VESSELS

SEA DAYS ALLOC.

NOAA

CHARTERS

COST OF CHARTERS

FREE DAYS

CROSS REFERENCES

FORM III

NOAA/NMFS

PERSONNEL SCHEDULE

FMC	REF.NO.	PAGE
SWC	034	3 of 3

#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
1.	Norman Abramson	Laboratory Director	GM 15	100	9WGN40T2
2.	Walburga Giguere	Administrative Officer	GS 11/10	25	"
	VACANT	"	GS 9/01	92	"
3.	Susan Smith	Fishery Biologist	GS 11/06	10	"
4.	Catherine Hurst	Administrative Clerk	GS 6/09	8	"
	VACANT	"	GS 5/01	92	"
5.	Rahel Fischer	Secretary	GS 6/05	100	"
6.	Joseph D'Amato	Clerk-Typist	GS 4/02	100	"
7.	Antonio Munoz	Maintenance	WG 9/05	100	"
8.	Maureen Leet	Librarian	GS 9/07	75	"
9.	Elaine Mavrantonis	Clerk-Typist	GS 4/07	80	"
10.	VACANT	Laborer	WG 2	50	"

FORM 1
PLAN SUMMARY

NOAA/NMFS

FMC	REF.NO.	PAGE
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APPROVAL SIGNATURE 

TITLE

PRIN. FAC.

FTE

\$K

UNIT LEADER

LINE ITEM NAME

GENERAL SUPPORT

La Jolla

16.7

1052.5

BARRETT, I.

Management Fund

A. PROBLEM STATEMENT/OBJECTIVE:

General Support where all costs benefit all tasks in the Center.

B. METHODOLOGY/APPROACH:

Most efficiently.

C. PRODUCT/SERVICES:

Paper, direction, guidance.

D. CLIENTS:

All tasks and projects.

E. CONTRACTS:

None.

FORM II

NOAA/NMFS

CYOP - RESOURCE SUMMARY

DATE

November, 9, 1987

FMC

REF.NO.

PAGE

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TITLE



GENERAL SUPPORT

HQ CONTACT(S)



TASK NAMES



9WGN40XX

OBJECT CLASS

TASK#1

TASK#2

TASK#3

TASK#4

TOTALS



DIRECT LABOR

556.2

PERS.BENEFITS

89.6

TRAVEL

40.0

TRANSPORTATION

16.9

RENT, COMM., UTIL.

193.2

PRINT/REPROD.

1.0

CONTRACTS

117.8

SUPPLIES/MATERIALS

33.2

EQUIPMENT

4.6

GRANTS

-

OTHER

-

TOTALS



1052.5

FTE (FTP)

16.0

FTE (OTFTP)

.7

VESSELS

SEA DAYS ALLOC.

-

NOAA

CHARTERS

-

-

COST OF CHARTERS

FREE DAYS

CROSS REFERENCES

PERSONNEL SCHEDULE

FMC	REF.NO.	PAGE
SWC	035	3 of 3

#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
1.	Barrett, Izadore	Director	ES IV	100	9WGN40C0
2.	Carr, John F.	Deputy Director	GM 15	100	"
3.	Mackett, David J.	Planning Officer	GM 14	100	"
4.	Remington, Benjamin F	Executive Officer	GM 13	100	"
5.	Vlymen, Lillian	Writer	GS 12	100	"
6.	Hostler, Virginia	Equal Employment Manager	GS 9	100	"
7.	Tonsich, Frances	Secretary	GS 8	100	"
8.	LaRoche, Nancy	Secretary	GS 7	100	"
9.	Engstrand, Barbara R.	Prog. Support Specialist	GS 11	100	"
10.	Watkins, Barbara A.	Procurement Agent	GS 6	100	9WGN40L0
11.	Breda, Veronica	Travel Clerk	GS 6	100	"
12.	Whyte, Ronald H.	Cash & Attendance Clerk	GS 4	100	"
13.	Manaligod, Esperanza	Clerk Typist	GS 4	100	"
14.	Holder, P. Gail	Clerk Typist	GS 4	100	"
15.	Wright, Charles	Engineering Technician	GS 11	100	"
16.	Marrow, Merle	Maintenance Man	WG 10	100	9WGN40M0
				100	"

FORM I PLAN SUMMARY

NOAA NMFS

FMC	REF.NO.	PAGE
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APPROVAL SIGNATURE 

TITLE	PRIN. FAC.	FTE	\$K	UNIT LEADER	LINE ITEM NAME
Information Technology Services	La Jolla, CA	7.5	333.0	Dorothy Roll	Information Analysis Dissemination

A. PROBLEM STATEMENT/OBJECTIVE:

The primary objective is to provide the information technology services to support the research and management staff in efficiently and effectively meeting the Center's mission goals.

B. METHODOLOGY/APPROACH:

To fulfill the charter of Information Technology Services (ITS), the staff keeps abreast with the fast-paced changing technology in the computer hardware and software fields by reading the volumes of computer related magazines/newsweeks, by evaluating equipment/software proposed for purchase, and by attending training seminars and trade shows.

C. PRODUCT/SERVICES:

ITS serves 1) as advisor for the Director's Office in the development of long range and short range ADP plans and in the recommendations for the transition from obsolete to next generation support systems and 2) as a service unit for the La Jolla Laboratory's staff by providing management systems development/implementation/maintenance and consulting services, and conducting user training programs.

D. CLIENTS:

The users of the services are the management, scientific, technical, and administrative personnel at the La Jolla Laboratory. ITS interacts with the Southwest Regional Office and the other laboratories of the Southwest Fisheries Center. ITS provides the liaison with the Data Management Office in NMFS headquarters.

E. CONTRACTS:

FORM II

NOAA/NMFS

CYOP - RESOURCE SUMMARY

DATE	October, 1987		
FMC	REF.NO.	PAGE	
SWC	036	2	of 5

TITLE	Information Technology Services (ITS)
HQ CONTACT(S)	

TASK NAMES	ITS La Jolla	CalCOFI Data System	ADP Tiburón		▽
OBJECT CLASS	TASK#1	TASK#2	TASK#3	TASK#4	TOTALS
DIRECT LABOR	8LIC1AGO 158.1	8LIC1AHO	8LIC1AGT 40.0		198.1
PERS.BENEFITS	25.3		6.4		31.6
TRAVEL	4.0		.5		4.5
TRANSPORTATION					
RENT, COMM., UTIL.			2.0		2.0
PRINT/REPROD.					
CONTRACTS	22.8	15.0	6.0		43.8
SUPPLIES/MATERIALS	18.0		2.8		20.8
EQUIPMENT	28.3		3.8		32.0
GRANTS					
OTHER					
TOTALS	256.5	15.0	61.5		333.0
FTE (FTP)	5		1.0		6.0
FTE (OTFTP)	1		.5		1.5

VESSELS	
#	SEA DAYS ALLOC.
NOAA	CHARTERS
COST OF CHARTERS	
#	FREE DAYS
CROSS REFERENCES	

FORM III

NOAA/NMFS

PERSONNEL SCHEDULE

FMC	REF.NO.	PAGE
SWC	036	3 of 5

#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
	Dorothy D. Roll	Supv. Computer Systems Analyst	Series 334 GS-12/8	100	8L1C1AG0
	Frank M. Ralston	Computer Systems Analyst	Series 334 GS-11/5	100	8L1C1AG0
	Susan Jacobson	Computer Programmer Analyst	Series 334 GS-11-4/5	100	8L1C1AG0
	Robert S. Bistodeau	Computer Programmer Analyst	Series 334 GS-11/1	100	8L1C1AG0
	James R. Payne	Computer Programmer	Series 334 GS-5/1	100	8L1C1AG0
	Vacant	Computer Programmer Analyst	Series 334 GS-5/1	100	8L1C1AG0
	Nancy Wiley	Computer Programmer Analyst	Series 334 GS-11/7	100	8L1C1AGT
	Ivan Argenal	Computer Programmer	GS-5/1	50	8L1C1AGT

NOAA/NMFS

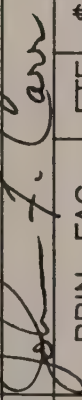
MAJOR MILESTONES, ACTIVITIES, AND EVENTS

[illegible]

FORM I
PLAN SUMMARY

NOAA/NMFS

FMC	REF.NO.	PAGE
SWC	037	1 of 4

APPROVAL SIGNATURE 

TITLE

Scientific Services

PRIN. FAC.

La Jolla

FTE

7

\$K

846.8

UNIT LEADER

J. CARR

LINE ITEM NAME

Resource Information

A. PROBLEM STATEMENT/OBJECTIVE:

Scientific Services include library, editorial and illustrative services designed to meet the unique requirements of a large research facility. Activities are closely integrated with the research of the SWC.

B. METHODOLOGY/APPROACH:

To provide professional level expertise to SWC scientists in the design, literature search and publication of research. A library specializing in marine fisheries is maintained on site. Scientific editorial and typing services are provided to the research staff. Capabilities are maintained in drafting, design, photography and desk-top publishing.

C. PRODUCT/SERVICES:

Library, illustrative and editorial.

D. CLIENTS:

Research staff of SWC and SWR office staff.

E. CONTRACTS:

None

FORM II

NOAA/NMFS

CYOP - RESOURCE SUMMARY

DATE	10/8/87	
FMC	REF.NO.	PAGE
SWC	037	2 of 4

TITLE ☐ SCIENTIFIC SERVICESHQ CONTACT(S) ☐

TASK NAMES	Editorial Services	Library Services	Illustrative Services	TOTALS
OBJECT CLASS	TASK#1	TASK#2	TASK#3	TASK#4
DIRECT LABOR	8LIC1ALT	8LIC1ALL	8LIC1AY0	8LIC1AYF
PERS.BENEFITS	48.2	40.2	90.7	30.4
TRAVEL	7.7	6.5	14.4	6.7
TRANSPORTATION	0.8	1.0	1.0	
RENT,COMM.,UTIL.	-	-	-	-
PRINT/REPROD.	-	4.0	-	-
CONTRACTS	-	1.5	6.0	-
SUPPLIES/MATERIALS	-	0.8	1.5	-
EQUIPMENT	-	30.0	2.5	-
GRANTS	3.0	1.0	-	-
OTHER	-	-	-	-
TOTALS	59.7	85.6	116.1	37.1
FTE (FTP)	2.0	2.0	3.0	-
FTE (OTFTP)	0	0	0	3.0

N.A.

VESSELS

SEA DAYS ALLOC.

NOAA

CHARTERS

COST OF CHARTERS

FREE DAYS

CROSS REFERENCES

FORM II

NOAA/NMFS

CYOP - RESOURCE SUMMARY

DATE	10/18/87		
FMC	REF.NO.	PAGE	
SWC	037	3 of 4	

TITLE SCIENTIFIC SERVICESHQ CONTACT(S)

TASK NAMES	8L1C1AYB	TASK#1	TASK#2	TASK#3	TASK#4	▽
OBJECT CLASS						TOTALS
DIRECT LABOR						210.1
PERS.BENEFITS						35.3
TRAVEL						2.8
TRANSPORTATION						-
RENT,COMM.,UTIL.						4.0
PRINT/REPROD.						7.5
CONTRACTS						2.3
SUPPLIES/MATERIALS	548.3					580.8
EQUIPMENT						4.0
GRANTS						
OTHER						
TOTALS	548.3					846.8
FTE (FTP)	-					
FTE (OTFTP)	-					

VESSELS

SEA DAYS ALLOC.

NOAA

CHARTERS

COST OF CHARTERS

FREE DAYS

CROSS REFERENCES

FORM III

NOAA/NMFS

PERSONNEL SCHEDULE

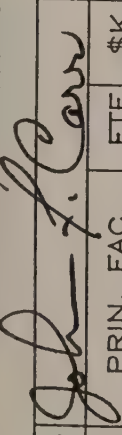
FMC	REF.NO.	PAGE
SWC	037	4 of 4

#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
1.	Jean M. Davis	Tech. Writer-Editor	GS 9/3	100	8L1A1A1ALT
2.	Lorraine Prescott	Editorial Assistant	GS 7/10	100	8L1A1A1ALT
3.	Debra A. Losey	Librarian	GS 9/3	100	8L1C1ALL
4.	Betty J. Stephan	Library Technician	GS 5/3	100	8L1C1ALL
5.	Kenneth S. Raymond	Scientific Illustrator	GS 12/8	100	8L1C1AY0
6.	Roy M. Allen	Scientific Illustrator	GS 8/7	100	8L1C1AY0
7.	Henry M. Orr	Scientific Illustrator	GS 8/6	100	8L1C1AY0

FORM I
PLAN SUMMARY

NOAA/NMFS

FMC	REF.NO.	PAGE
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APPROVAL SIGNATURE 

TITLE	PRIN. FAC.	FTE	\$K	UNIT LEADER	LINE ITEM NAME
DATA MANAGEMENT AND TECHNICAL SERVICES	HONOLULU LAB	14.8	523 523	D. TIEMAN	RESOURCE INFORMATION

A. PROBLEM STATEMENT/OBJECTIVE: DMTS IS TASKED WITH PROVIDING FOR THE CAPTURE, VERIFICATION, EDITING, MAINTENANCE, SECURITY, AND DOCUMENTATION OF GATHERED DATA; PROGRAMMING, TRAINING, AND CONSULTATION ON ADP RELATED HARDWARE AND SOFTWARE ISSUES, MAINTENANCE OF SCIENTIFIC REFERENCE LIBRARY MATERIALS, PROVIDING SCIENTIFIC MANUSCRIPT EDITORIAL REVIEWS, AND TEXT PREPARATION SERVICES, AND SCIENTIFIC ILLUSTRATIONS AND GRAPHICS SERVICES.

B. METHODOLOGY/APPROACH: NO MAJOR UPGRADES TO SERVICES WILL BE POSSIBLE THIS YEAR, ALTERNATIVE METHODS WILL BE EXAMINED, AND OUTDATED CP/M EQUIPMENT AND PROGRAMS WILL CONTINUE TO BE REPLACED WITH MS/DOS 16 AND 32 BIT SYSTEMS, AS FUNDING WILL ALLOW.

C. PRODUCT/SERVICES: DMTS PROVIDES TYPED MANUSCRIPTS AND CORRESPONDENCE; CURRENT REFERENCE MATERIALS; DATA, PROGRAMS, AND INFORMATION ESSENTIAL TO NMFS MISSION; AND PROVIDES FOR A MORE PRODUCTIVE STAFF THROUGH IMPLEMENTATION OF BETTER EQUIPMENT AND SOFTWARE.

D. CLIENTS: PRODUCTS PRODUCED BY THE DATA MANAGEMENT AND TECHNICAL SERVICES PROGRAM ARE USED IN ALL AREAS OF THE HONOLULU LAB.

E. CONTRACTS: CONTRACTING OF COMPUTER SUPPORT FROM THE UNIVERSITY OF HAWAII WILL CONTINUE TO BE REQUIRED, AS WILL CONTRACTING FOR TRANSLATION SERVICES FOR FOREIGN DOCUMENTS.

FORM II

NOAA/NMFS

CYOP - RESOURCE SUMMARY

DATE	Oct. 20, 1987	
FMC	REF.NO.	PAGE
SMC	040	2 of 4

TITLE ☐ DATA MANAGEMENT AND TECHNICAL SERVICESHQ CONTACT(S) ☐TASK NAMES ☐

OBJECT CLASS

DIRECT LABOR

PERS.BENEFITS

TRAVEL

TRANSPORTATION

RENT,COMM.,UTIL.

PRINT/REPROD.

CONTRACTS

SUPPLIES/MATERIALS

EQUIPMENT

GRANTS

OTHER

TOTALS ☐

FTE (FTP)

FTE (OTFTP)

TASK NAMES	ADP	PUBLICATION	ILLUSTRATION	LIBRARY	
OBJECT CLASS	TASK#1 8L1C1AJ1	TASK#2 8L1C1AJ2	TASK#3 8L1C1AJ3	TASK#4 8L1C1AJ4	TOTALS
DIRECT LABOR	186.5	120.1	24.0	41.0	371.6
PERS.BENEFITS	24.1	15.7	3.1	5.4	48.3
TRAVEL	.8	0.0	0.0	0.0	.8
TRANSPORTATION	.4	0.0	0.0	0.0	.4
RENT,COMM.,UTIL.	35.0	0.0	0.0	0.0	35.0
PRINT/REPROD.	0.0	0.0	0.0	0.0	0.0
CONTRACTS	16.3	6.5	0.0	3.9	26.7
SUPPLIES/MATERIALS	23.2	1.0	4.0	13.5	41.7
EQUIPMENT	18.0	0.0	0.0	0.0	18.0
GRANTS	0.0	0.0	0.0	0.0	0.0
OTHER	0.0	0.0	0.0	0.0	0.0
TOTALS	304.3	143.3	31.1	63.8	542.5
FTE (FTP)	4.0	3.0	1.0	1.0	9.0
FTE (OTFTP)	3.9	1.9	0.0	0.0	5.8

VESSELS

SEA DAYS ALLOC.

0

NOAA CHARTERS

0 0

COST OF CHARTERS

0

FREE DAYS

0

CROSS REFERENCES

PERSONNEL SCHEDULE

FMC	REF.NO.	PAGE
SWC	040	3 of 4

#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
FTP					
1	Donald R. Tieman	Supervisory Computer Sys. Analyst	GS/11/01	100.00%	8L1C1AJ1
2	Sally H. Kuba	Computer Programmer	GS/09/05	100.00%	8L1C1AJ1
3	Lucille T. Tsukano	Computer Aid	GS/06/10	100.00%	8L1C1AJ1
4	Charles K. Pribyl	Computer Programmer	GS/05/04	100.00%	8L1C1AJ1
PTP					
5	Janet L. Pappas	Computer Programmer	GS/05/02	96.00%	8L1C1AJ1
6	Wayde S. Higuchi	Computer Programmer	GS/05/02	96.00%	8L1C1AJ1
7	Robert Henderson	Computer Programmer	GS/05/01	71.00%	8L1C1AJ1*
				25.00%	8L1C1AUW
TEMPORARIES					
8	Brent M. Miyamoto	Computer Assistant	GS/06/01	30.00%	8L1C1AJ1
9	Jeffrey H. Hoffman	Data Transcriber	GS/03/01	10.00%	8L1C1AJ1
10	Steffiny M. Masada	Data Transcriber	GS/01/01	40.00%	8L1C1AJ1
11	Doris Yanagi	Data Transcriber	GS/01/01	40.00%	8L1C1AJ1
FTP					
12	Leslie C. Williams	Technical Publication Writer/Editor	GS/09/01	100.00%	8L1C1AJ2
13	Elizabeth F. Young	Editorial Assistant	GS/07/09	100.00%	8L1C1AJ2
14	Louise F. Lembeck	Editorial Clerk	GS/05/10	100.00%	8L1C1AJ2
PTP					
15	Virginia L. Ishida	Editorial Clerk	GS/05/09	96.00%	8L1C1AJ2
16	Gail Rhoden	Clerk (typing)	GS/04/01	96.00%	8L1C1AJ2
FTP					
17	Thomas W. Weber	Scientific Illustrator	GS/07/02	100.00%	8L1C1AJ3
FTP					
18	Hazel S. Nishimura	Librarian	GS/11/07	100.00%	8L1C1AJ4

NOAA/NMFS

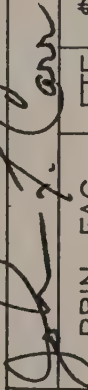
TASK#	DESCRIPTION	DATE	STATUS	ASSIGNED TO	COMPLETED
1	MAJOR MILESTONES, ACTIVITIES, AND EVENTS				

[illegible]

FORM 1 PLAN SUMMARY

NOAA/NMFS

FMC	REF.NO.	PAGE
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APPROVAL SIGNATURE 

TITLE	PRIN. FAC.	FTE	\$K	UNIT LEADER	LINE ITEM NAME
Insular Ecosystem Study	Honolulu Laboratory	2.58	107.2	G. W. Boehlert	Resource Information

A. PROBLEM STATEMENT/OBJECTIVE:

Island ecosystems are characterized by resources with relatively low standing stock and high vulnerability to overexploitation. The Insular Ecosystem Study conducts research on the ecology of fish and shellfish resources of island systems to better understand the effects of the ocean environment on variability in these resources.

B. METHODOLOGY/APPROACH:

In FY-88 the program will continue research on trophic interactions of island slope bottom fish and Northwestern Hawaiian Island seabirds. We will develop studies of recruitment of insular resources through study of distribution relative to oceanography. Additional studies will test sampling gear, address experimental validation of otolith ageing techniques, and complete cooperative studies of west coast groundfish.

C. PRODUCT/SERVICES:

Output products from this task include information on ecological associations of different island species and provide basic data used for ecosystem models, fishery management plans, and environmental impact statements.

D. CLIENTS:

Results of the research, in the form of data and analysis, will be used by the NMFS Southwest Region, the Western Pacific Regional Fishery Management Council, the fishing industry, the Minerals Management Service, conservation groups, private consultants and contractors, and State of Hawaii agencies. Cooperation in studies of recruitment will also benefit international agencies with current programs in tropical regions.

E. CONTRACTS:

None.

FORM II

NOAA/NMFS

CYOP -- RESOURCE SUMMARY

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TITLE

Insular Ecosystem Study

HQ CONTACT(S)

TASK NAMES

8L1A6AL0

OBJECT CLASS

TASK#1

TASK#2

TASK#3

TASK#4

TOTALS

DIRECT LABOR

84.5

PERS.BENEFITS

10.5

TRAVEL

4.3

TRANSPORTATION

1.5

RENT, COMM., UTIL.

0

PRINT/REPROD.

0

CONTRACTS

0

SUPPLIES/MATERIALS

4.0

EQUIPMENT

2.4

GRANTS

0

OTHER

0

TOTALS

107.2

FTE (FTP)

1.45

FTE (OTFTP)

1.13

VESSELS

SEA DAYS ALLOC.

19

NOAA

CHARTERS

19

COST OF CHARTERS

--

FREE DAYS

--

CROSS REFERENCES

8L1A4BRS

8L1A6AE0

8L1A4IL2

PERSONNEL SCHEDULE

FMC	REF.NO.	PAGE
SWC	044	3 of 5

#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
FTP					
1	George W. Boehlert	Supervisory Fishery Biologist Research	GM/14/00	25.00%	8L1A6AL0*
				75.00%	8L1A6AE0
2	Thomas K. Kazama	Fishery Biologist General	GS/11/07	100.00%	8L1A6AL0
3	Michael P. Seki	Fishery Biologist	GS/09/01	20.00%	8L1A6AL0*
				80.00%	8L1A6AE0
TEMPORARIES					
4	Vacant (vice Ito)	Biological Aid	GS/04/01	50.00%	8L1A6AL0
5	Vacant	Biological Technician	GS/05/01	63.00%	8L1A6AL0

FORM IV

NOAA/NMFS

MILESTONE ARRAY

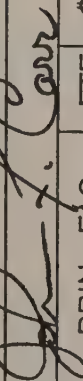
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			FY 88 89 90															
TASK#	S E Q	M A E	MAJOR MILESTONES, ACTIVITIES, AND EVENTS															
				1	2	3	4	1	2	1	2							
8L1A6ALO	1	M	Manuscript on time series of seabird feeding from Northwestern Hawaiian Islands				S											
	2	E	Complete trophic studies of snappers from the Mariana Archipelago.					X										
	3	A	Initiate field studies on postlarval fish distribution around islands relative to oceanography.			A												
	4	A	Collaborate with the University of Hawaii and Joint Institute for Marine and Atmospheric Research to establish environmental data base.			X												
	5	M	Convene workshop on reproduction and early life history of <u>Sebastes</u> (pending funding).			M												
	6	M	Publish manuscript on horizontal distribution of larval fishes around Johnston Island.				S											

FORM I PLAN SUMMARY

NOAA/NMFS

FMC	REF.NO.	PAGE
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APPROVAL SIGNATURE 

TITLE

PRIN. FAC.

FTE

\$K

UNIT LEADER

LINE ITEM NAME

Seamount Resources Study

Honolulu
Laboratory

4.43

217.5

G. W. Boehlert

Resource Information

A. PROBLEM STATEMENT/OBJECTIVE:

Certain seamounts may be highly productive and support commercial concentrations of living resources. The Seamount Resources Program emphasizes research on the seamounts of the central North Pacific and the Hawaiian chain. The focus of a fishery in the 1970's, these seamounts produced approximately a million metric tons of pelagic armorhead. We seek to understand the dynamics of the resource and of the ecosystem which supported it.

B. METHODOLOGY/APPROACH:

Stocks of armorhead are currently depleted but could sustain a moderate-scale fishery if rebuilt; trawl fisheries within the fishery conservation zone for seamount species have been closed to foreign fishing and an important part of the program is to monitor the rebuilding of the stocks. Research in the task includes components of stock dynamics and assessment, biology of the important resources, and seamount ecology, including collaborative research with University researchers. In FY-88, we will continue to develop fishery-independent assessment tools which may be used to estimate relative stock abundance. Understanding the relationship of oceanography and stock dynamics is directed towards determining potential yield, predicting recruitment, and developing generalities about seamount productivity.

C. PRODUCT/SERVICES:

Output products from this task will be used by the Southwest Region and Western Pacific Regional Fishery Management Council to decide upon regulatory action on the seamount fishery, currently closed to foreign fishing. Products will also be used for fishery management plans and the bottom fish/seamount groundfish fishery management plan monitoring report. Since seamounts in the region are sources of important manganese crusts containing strategic minerals, our work on the ecology of seamounts can be used by the Minerals Management Service, conservation groups, and private consultants and contractors to consider environmental impacts of mineral exploitation.

D. CLIENTS:

Results of the research, in the form of data and analysis, will be used by the NMFS Southwest Region, the Western Pacific Regional Fishery Management Council, the fishing industry, the Minerals Management Service, conservation groups, private consultants and contractors, and State of Hawaii agencies.

E. CONTRACTS:

University of Hawaii: Longline timer construction, \$4.0; Electron microscopy/elemental analysis, \$2.5.

FORM II

NOAA/NMFS

CYOP - RESOURCE SUMMARY

DATE	Oct. 20, 1987	
FMC	REF.NO.	PAGE
SWC	045	2 of 4

TITLE ☐ Seamount Resources StudyHQ CONTACT(S) ☐

TASK NAMES	8L1A6AE0	TASK#1	TASK#2	TASK#3	TASK#4	▽
OBJECT CLASS						TOTALS
DIRECT LABOR	161.3					161.3
PERS.BENEFITS	19.0					19.0
TRAVEL	6.5					6.5
TRANSPORTATION	1.4					1.4
RENT,COMM.,UTIL.	0					0
PRINT/REPROD.	0.8					0.8
CONTRACTS	6.5					6.5
SUPPLIES/MATERIALS	16.8					16.8
EQUIPMENT	5.2					5.2
GRANTS	0					0
OTHER	0					0
TOTALS	217.5					217.5
FTE (FTP)	3.8					3.8
FTE (OTFTP)	0.63					0.63

VESSELS	
# SEA DAYS ALLOC.	
76	
NOAA	CHARTERS
76	
COST OF CHARTERS	
# FREE DAYS	
CROSS REFERENCES	
8L1A6AL0	
8L1A4IL2	

PERSONNEL SCHEDULE

FMC	REF.NO.	PAGE
SWC	045	3 of 4

#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
FTP					
1	George W. Boehlert	Supervisory Fishery Biologist Research	GM/14/00	75.00%	8L1A6AE0*
2	David A. Somerton	Fishery Biologist Research	GS/12/02	25.00%	8L1A6AL0
3	Robert Humphreys, Jr.	Fishery Biologist Research	GS/09/01	25.00%	8L1A6AE0*
4	Michael P. Seki	Fishery Biologist	GS/09/01	75.00%	8L1A41L2
5	Bert S. Kikkawa	Biological Technician Fisheries	GS/07/05	100.00%	8L1A6AE0
TEMPORARIES					
6	Christopher D. Wilson	Biological Technician Fisheries	GS/06/01	80.00%	8L1A6AL0
				20.00%	8L1A6AE0
				100.00%	8L1A6AE0
				63.00%	8L1A6AE0

NOAA/NMFS

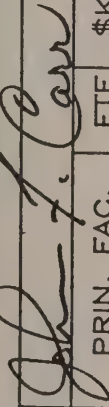
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FMC	REF.NO.	PAGE
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FORM I
PLAN SUMMARY

NOAA/NMFS

FMC	REF.NO.	PAGE
SWC	046	1 of 4

APPROVAL SIGNATURE 

TITLE

PRIN. FAC. FTE \$K UNIT LEADER

LINE ITEM NAME

Insular Fisheries Habitat Research

Honolulu Lab.

10.5 293

D. A. Somerton

Resource Information

A. PROBLEM STATEMENT/OBJECTIVE:

In the central Pacific Ocean, several real and potential threats to fisheries habitat exist, including Ocean Thermal Energy Conversion, manganese crust mining, diversion of fresh waters from important inshore habitats, coastal dredge and fill operations, and associated ocean dumping practices. The activities of the Fisheries Habitat Research task are aimed at determining how important elements of the affected ecosystems vary, so that potential impacts of these activities can be assessed.

B. METHODOLOGY/APPROACH:

Biological and physical data are collected by sampling aboard a variety of vessels or by direct observation with scuba or by conducting laboratory experiments on live animals. For most of the studies, emphasis is placed on developing a time series of observations to allow a better understanding of the natural variability of important species and to establish a baseline for judging the effects of perturbations to the ecosystem.

C. PRODUCT/SERVICES:

The results of the research will be published both as administrative reports and as journal articles.

D. CLIENTS:

Results of the research, including the analyses of field and laboratory experiments, will be used by the NMFS Southwest Region, the Western Pacific Regional Fishery Management Council, NOAA's Ocean Minerals and Energy Division, the Minerals Management Service, conservation groups, private consultants and contractors, and State of Hawaii agencies.

E. CONTRACTS:

Joint Institute of Marine and Atmospheric Research visiting scientist program; \$10,000.

FORM II

NOAA/NMFS

CYOP - RESOURCE SUMMARY

DATE	October 20, 1987	
FMC	REF.NO.	PAGE
SWC	046	2 of 4

TITLE



Insular Fisheries Habitat Research

HQ CONTACT(S)



TASK NAMES



OBJECT CLASS

TASK#1
8L1A41L2

TASK#2

TASK#3

TASK#4

TOTALS



DIRECT LABOR

204.6

26.0

4.2

2.8

1.2

0.6

6.0

21.8

15.8

10.0

--

TOTALS

293.0

3.2

7.3

FTE (OTFTP)

7.3

3.2

293.0

--

4.2

2.8

1.2

0.6

6.0

21.8

15.8

10.0

--

293.0

3.2

7.3

VESSELS

SEA DAYS ALLOC.

NOAA

CHARTERS

COST OF CHARTERS

FREE DAYS

CROSS REFERENCES

PERSONNEL SCHEDULE

FMC	REF.NO.	PAGE
SWC	046	3 of 4

#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
FTP					
1	David A. Somerton	Fishery Biologist Research	GS/12/02	75.00%	8L1A41L2*
2	Bruce C. Mundy	Fishery Biologist Research	GS/09/01	25.00%	8L1A6AE0
3	George H. Balazs	Zoologist	GS/11/05	100.00%	8L1A41L2
				25.00%	8L1A41L2*
				75.00%	8L1A5VT1
PTP					
4	Carol M. Fujisawa	Biological Aid Fisheries	GS/04/01	100.00%	8L1A41L2
5	Jeffrey D. Sampaga	Biological Laboratory Technician	GS/05/05	20.00%	8L1A41L2*
				80.00%	8L1C2A00
TEMPORARIES					
6	Vacant (vice Ito)	Biological Aid	GS/04/01	50.00%	8L1A41L2
7	Vacant (vice Yuen)	Computer Clerk	GS/03/01	63.00%	8L1A41L2
8	Kevin C. Landgraf	Biological Technician Fisheries	GS/05/01	100.00%	8L1A41L2
9	Donald R. Kobayashi	Biological Technician	GS/05/01	100.00%	8L1A41L2
10	Ronald K. Yoshimoto	Biological Aid	GS/02/01	100.00%	8L1A41L2
11	Vacant	Biological Aid	GS/03/01	100.00%	8L1A41L2
12	Craig M. Rowland	Biological Aid	GS/03/01	100.00%	8L1A41L2
13	Vacant (student)	Biological Technician	GS/05/01	63.00%	8L1A41L2

NOAA/NMFS

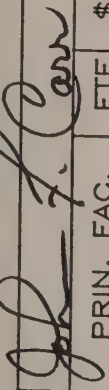
TASK#	S E Q	M A E	MAJOR MILESTONES, ACTIVITIES, AND EVENTS	FY 88	89	90
				1	2	3
				4	1	2
				1	2	1
				2	1	2
8LLA41L2	1	E	Complete monitoring nehu population on Pearl Harbor	A		
	2	A	Develop laboratory program on reproductive response to food variation in nehu	J		
	3	M	Report of the fluctuation of the Pearl Harbor nehu population	J		
	4	E	Complete study of vertical distribution of zooplankton around Oahu	A		
	5	E	Complete study of vertical distribution of ichthyoplankton off Oahu		F	
	6	M	Publish user manual for habitat inventory/mapping system as administrative report	J		
	7	A	Continue long-term baseline monitoring at Kona transects and develop strategies for data analysis		O	O
	8	A	Identify juvenile habitat for important fisheries species	A----	D	
	9	A	Map sea turtle foraging habitat	J-----	D	
	10	M	Report on the response of the Pearl Harbor population of nehu to variations in environmental variables and abundances of predators and prey		A	
	11	M	Report examining ways of managing the commercial harvest of nehu		A	

FORM 1

PLAN SUMMARY

NOAA/NMFS

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APPROVAL SIGNATURE 

TITLE

PRIN. FAC.

FTE

\$K

UNIT LEADER

LINE ITEM NAME

Insular Stock-Assessment

Honolulu Lab

4.66

197.5

S. Ralston

Information Anal. & Dessemin.

A. PROBLEM STATEMENT/OBJECTIVE:

This task addresses the problem of assessing exploited insular resources to determine their developmental potential or the extent to which they are overfished. The analyses conducted and the information produced concern tropical Pacific slope ecosystems, including especially members of the bottomfish community, the multispecies Hawaiian lobster fishery, and developing fisheries for pandalid shrimps of the genus Heterocarpus. Research results provide decision makers with the information necessary to manage these fisheries.

B. METHODOLOGY/APPROACH:

Data are collected by regulatory agencies and analysed by quantitative fisheries models to detect underlying patterns in growth, mortality, and community production. Research data are also collected during scientific cruises to determine spatial and temporal patterns in resource abundance, to develop estimates of biomass, and to acquire biological samples for laboratory analysis.

C. PRODUCT/SERVICES:

Annual reports concerning the status of the bottomfish fishery and the status of the lobster fishery are produced for use by the Western Pacific Regional Fishery Management Council. Reports detailing the developmental potential of fisheries resources are completed as necessary and made available to the fishing industry, concerned user groups, and the Council. Innovative methodologies and noteworthy findings are published in the scientific literature.

D. CLIENTS:

The primary clients will be the Western Pacific Fishery Management Council, its Scientific and Statistical Committee, and the industry advisory panel. Island governments throughout the Pacific region also benefit substantially from the research conducted in this task.

E. CONTRACTS:

U. S. Cold Storage; \$1,800.00: cold storage of bait and scientific specimens.
 Dan's Dive Shop; \$700.00: supplies and maintenance for diving program.

FORM II

NOAA/NMFS

CYOP -- RESOURCE SUMMARY

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TITLE



Insular Stock-Assessment

HQ CONTACT(S)



TASK NAMES



OBJECT CLASS

TASK#1
8L1C5AH1

TASK#2

TASK#3

TASK#4

TOTALS



DIRECT LABOR

160.4

PERS.BENEFITS

19.2

TRAVEL

3.0

TRANSPORTATION

1.2

RENT, COMM., UTIL.

0.0

PRINT/REPROD.

0.0

CONTRACTS

2.5

SUPPLIES/MATERIALS

9.2

EQUIPMENT

2.0

GRANTS

0.0

OTHER

0.0

TOTALS

197.5

FTE (FTP)

3.0

FTE (OTFTP)

1.7

VESSELS

SEA DAYS ALLOC.

64

NOAA

CHARTERS

64

0

COST OF CHARTERS

FREE DAYS

CROSS REFERENCES

PERSONNEL SCHEDULE

FMC	REF.NO.	PAGE
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#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
FTP					
1	Stephen V. Ralston	Fishery Biologist Research	GS/13/01	100.00%	8L1C5AH1
2	Paul M. Shiota	Fishery Biologist General	GS/11/06	100.00%	8L1C5AH1
3	Darryl T. Tagami	Operation Res. Analyst	GS/07/05	100.00%	8L1C5AH1
PTP					
4	Happy A. Williams	Biological Aid Microbiology	GS/04/03	96.00%	8L1C5AH1
5	Alan R. Everson	Biological Technician	GS/07/04	70.00%	8L1C5AH1

NOAA/NMFS

407

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[illegible]

FMC	REF.NO.	PAGE
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APPROVAL SIGNATURE

TITLE

Tuna & Billfish Assessment

PRIN.

La Jolla

FAC.

7

FTE

360.2

\$K

N. Bartoo

UNIT LEADER

LINE ITEM NAME

Information Analysis and
Dissemination

- A. PROBLEM STATEMENT/OBJECTIVE:** The U.S. fishes tunas throughout the Oceanic ecosystem in the Pacific and Indian Oceans. An NMFS goal is to maintain Pacific and Indian Oceans stocks of tropical tunas at sustainable harvest levels and help ensure continued U.S. access to these stocks. A second goal is to manage north Pacific albacore stocks to support domestic harvests. This task supplies needed scientific and technical information and assessments on these stocks and provides them to managers to meet the goal.
- B. METHODOLOGY/APPROACH:** This task collects and analyzes tropical tuna and albacore fisheries data including catch, catch-effort, biological, and environmental data to determine conditions of the various stocks, assess maximum sustainable yield, evaluate the impact of management and fishery actions and integrate data gathering and evaluation process. This is done in both single and multi-species contexts.
- C. PRODUCT/SERVICES:** Principal products are global status of stocks summaries, situation reports, quantitative analyses and integrated assessment models.
- D. CLIENTS:** Products and information of this task are used by policymakers, industry decisionmakers, international tuna management organizations, fishery management councils, fishermen, and the research community.
- E. CONTRACTS:** Pacific Marine Fisheries Commission; \$43K; supply logbook and port sampling data for the U.S. north Pacific albacore fishery.

FORM II
CYOP - RESOURCE SUMMARY

NOAA/NMFS

DATE	10/15/86	
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TITLE Tuna and Billfish Assessment

HQ CONTRACT(S)

TASK NAMES	Tropical Tuna	Modeling	Billfish	
OBJECT CLASS	TASK#1	TASK#2	TASK#3	TASK#4
DIRECT LABOR	8L1C5AB2	8L1C2A20	8L1C5AB1	TOTALS
PERS.BENEFITS	142.6	54.3	50.3	247.2
TRAVEL	22.7	8.7	8.0	39.4
TRANSPORTATION	2.5	0.75	1.25	4.5
RENT, COMM., UTIL.	0.0	0.0	0.0	0.0
PRINT/REPROD.	6.0	0.5	0.5	7.0
CONTRACTS	3.3	0.5	1.2	5.0
SUPPLIES/MATERIALS	43.4	0.0	0.0	43.4
EQUIPMENT	7.0	2.0	2.5	11.5
GRANTS	2.2	0.0	0.0	2.2
OTHER				
TOTALS	229.7	66.75	63.75	360.2
FTE (FTP)	4.0	1.0	1.0	6.0
FTE (OTFTP)	0.5	0.5	0.0	1.0

VESSELS
SEA DAYS ALLOC.

NOAA CHARTERS

COST OF CHARTERS

FREE DAYS

10

CROSS REFERENCES

FORM III
PERSONNEL SCHEDULE

NOAA/NMFS

FMC	REF.NO.	PAGE
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#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
1.	N. Bartoo	Fish. Biologist	GM 13	100	8L1C5AB2
2.	D. Au	Fish. Biologist	GS 12/9	100	8L1C5AB2
3.	D. Holts	Fish. Biologist	GS 09/8	100	8L1C5AB2
4.	S. Gray	Secretary	GS 06/10	100	8L1C5AB2
5.	P. Kleiber	Fish. Biologist	GM 13	100	8L1C2A20
6.	J. Squire	Fish. Biologist	GS 13/10	100	8L1C5AB1

FORM IV

NOAA/NMFS

MILESTONE ARRAY

FMC	REF. NO.	PAGE
SWC	050	4 of 5

FY 88 89 90

TASK #	S	M	MAJOR MILESTONES, ACTIVITIES, AND EVENTS	1	2	3	4	1	2	1	2
8L1C5AB2	1	E	Publish compendium of tuna and billfish stocks and fisheries reports			J					
8L1C5AB2	2	A	Produce 1988 sections for compendium			O	S				
8L1C5AB2	3	A	Analyze data on incidental/indicator species co-occurring with tuna			O	S				
8L1C5AB2	4	A	Coordinate investigation of large-scale ocean features and catchability			O				S	
8L1C5AB2	5	A	Contribute to albacore information document			O	S				
8L1C5AB2	6	A	Plan and conduct workshop on shark population biology			J	S				
8L1C5AB2	7	A	Complete field experiment and manuscript on marlin tracking			O	A				
8L1C5AB2	8	A	Organize annual tuna conference			O	M				

MILESTONE ARRAY

FMC	REF.NO.	PAGE
SWC	050	5 of 5

	FY	88		89		90
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TASK #	S E Q	M A E	MAJOR MILESTONES, ACTIVITIES, AND EVENTS	1	2	3	4	1	2	1	2
8L1C5AB2	9	A	Prepare manuscripts for International Billfish Symposium	O			A				
8L1C2A20	10	A	Participate in modeling of Tuna Vessel Search Behavior (TVOD analysis)	O			S				
8L1C2A20	11	A	Coordinate FAO sessions of tuna fisheries interactions	O			D				
8L1C2A20	12	A	Initiate tuna fisheries interactions model	O						S	
8L1C5AB1	13	E	Produce Angler Survey/Billfish Newsletter	O	J						
8L1C5AB1	14	A	Coordinate Pacific cooperative billfish tagging	O			S				
8L1C5AB1	15	A	Conduct annual angler survey	O	J						
8L1C5AB1	16	A	Document results from tagging project	O			S				

FORM I
PLAN SUMMARY

NOAA/NMFS

FMC	REF.NO.	PAGE
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APPROVAL SIGNATURE

TITLE

Tuna Fishery Monitoring
and evaluation

PRIN. FAC.
La Jolla

FTE
3

\$K
199.5

UNIT LEADER
W. Parks

LINE ITEM NAME

Information Analysis
and Dissemination

A. PROBLEM STATEMENT/OBJECTIVE: The SWFC is responsible for NMFS research on tunas and billfishes in pelagic ecosystems in the Pacific and Indian Oceans. Wise management of fishery resources and fisheries in these ecosystems requires consideration of the status of the resources and exploiting fisheries and predictions of the effects on system components (e.g., resources and fisheries) of perturbations such as changes in the level of fishing and in fishery management strategies. The task supplies scientific advice on status and predictions of effects of system changes and management, and coordinates research efforts of all SWFC tasks working on Pacific and Indian Oceans tunas and large pelagics.

B. METHODOLOGY/APPROACH: Task scientists collect fishery data and analyze data using statistical, population dynamic and simulation techniques to assess and describe status of stocks and fisheries and to predict effects of change.

C. PRODUCT/SERVICES: Principal products are descriptions of fishery resources and fisheries, reports of status of stocks, reports evaluating management and policy situations and reports of recent development in fisheries, processing and trade in tuna and large pelagics.

D. CLIENTS: Products are used by NMFS officials to develop and evaluate policies that affect the supply of tuna to U.S. consumers. Secondary users are U.S. fishing, processing and trading interests who use the information to plan their operations.

E. CONTRACTS: Private. \$10K. Summarize purse seine logbook data.

FORM II

CYOP - RESOURCE SUMMARY

NOAA/NMFS

DATE 10/15/87

FMC REF.NO. PAGE

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TITLE

Fishery Monitoring and Evaluation

HQ CONTRACT(S)

TASK NAMES	Monitor. & Eval.	Coordina- tion	TASK#3	TASK#4	TOTALS
OBJECT CLASS	TASK#1	TASK#2			
	8L1C2A30	8L1C2A40			
DIRECT LABOR	76.9	62.9			139.8
PERS. BENEFITS	12.3	10.1			22.4
TRAVEL	0.8	9.9			10.7
TRANSPORTATION	0.0	0.2			0.2
RENT, COMM., UTIL.	0.7	6.0			6.7
PRINT/REPROD.	1.0	2.0			3.0
CONTRACTS	0.0	10.0			10.0
SUPPLIES/MATERIALS	1.0	2.3			3.3
EQUIPMENT	1.4	2.0			3.4
GRANTS					
OTHER					
TOTALS	94.1	105.4			199.5
FTE (FTP)	2.0	1.0			3.0
FTE (OTFTP)					

VESSELS

SEA DAYS ALLOC.

NOAA

CHARTERS

COST OF CHARTERS

FREE DAYS

CROSS REFERENCES

NOAA/NMFS

FMC	REF. NO.	PAGE
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NOAA/NMFS

NOAA/NMFS

FY 88 | 89 | 90

TASK #	S	M	MAJOR MILESTONES, ACTIVITIES, AND EVENTS	1	2	3	4	1	2	1	2
	E	A									
	Q	E									
8L1C2A30	1	A	Monitor developments in world fisheries for tuna and large pelagics	O			S	O	S	O	S
8L1C2A30	2	E	Produce and distribute quarterly SWFC Tuna Newsletter	O	J	A	J				
8L1C2A30	3	A	Execute activities to complete SWFC tuna research goal D	O			S				
8L1C2A30	4	A	Monitor fisheries for and trade in fresh tuna and large pelagics	O			S	O	S	O	S
8L1C2A30	5	E	Prepare manuscript on "Indian Ocean Yellowfin Tuna"	O			S				
8L1C2A30	6	E	Prepare manuscript on "U.S. Tuna Trade Summary, 1986"	O			S				
8L1C2A30	7	E	Prepare manuscript on "Reviewing Indian Ocean Tuna Fisheries"	O			S				
8L1C2A40	8		Provide background information for U.S. IATTC section as required	M							
8L1C2A40	9		Coordinate SWFC research on tropical tunas	O			S	O	S	O	S

FORM I
PLAN SUMMARY

NOAA/NMFS

FMC	REF.NO.	PAGE
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APPROVAL SIGNATURE

TITLE

Multispecies Data

Collection & Evaluation

PRIN. FAC.

La Jolla

FTE

9

\$K

309.4

UNIT LEADER

A. Coan

LINE ITEM NAME

Information Analysis
and Dissemination

A. PROBLEM STATEMENT/OBJECTIVE:

Inherent in the problem of ecosystem monitoring and forecasting changes in marine resources is the creation of comprehensive data bases. The task addresses this problem by collecting and processing information on tunas and other large pelagics throughout the oceans of the world. Collection and processing of information on marine mammals is also conducted as mandated under the Marine Mammal Protection Act.

B. METHODOLOGY/APPROACH:

The task uses statistical methodologies to develop and maintain systems for the collection of information on marine fisheries for large pelagics and marine mammals. It also uses current computer capabilities to create and maintain data bases and provide software development support for analyses of ecosystems and resource forecasting for large pelagics and marine mammals.

C. PRODUCT/SERVICES:

Principal products of the task are software, data bases and data collection programs for large pelagics and marine mammals. The task also produces annual summaries of data collected through its various programs.

D. CLIENTS:

The tasks's products and services are used by PFRD and FMMID research staffs, various foreign and domestic fisheries management organizations, fisheries administrators, industry and constituency groups.

E. CONTRACTS:

Key punch - \$7K
Microfilming - \$4K, University of California, San Diego

FORM II

CYOP - RESOURCE SUMMARY

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TITLE

Multispecies Data Collection and Evaluation

HQ CONTRACT(S)

TASK NAMES	Large Pelagics	Marine Mammals	TASK#3	TASK#4	TOTALS
OBJECT CLASS	TASK#1	TASK#2			
	8L1C1AW1	8L1C1VW2			
DIRECT LABOR	102.0	119.6			221.6
PERS. BENEFITS	16.3	19.1			35.4
TRAVEL	2.5	1.0			3.5
TRANSPORTATION	0.0	0.0			0.0
RENT, COMM., UTIL.	10.0	21.0			31.0
PRINT/REPROD.	3.0	0.0			3.0
CONTRACTS	0.0	11.0			11.0
SUPPLIES/MATERIALS	2.2	1.7			3.9
EQUIPMENT	0.0	0.0			0.0
GRANTS	0.0	0.0			0.0
OTHER	0.0	0.0			0.0
TOTALS	136.0	173.4			309.4
FTE (FTP)	3.0	4.0			7.0
FTE (OTFTP)	0.5	1.5			2.0

VESSELS

SEA DAYS ALLOC.

NOAA CHARTERS

COST OF CHARTERS

FREE DAYS

CROSS REFERENCES

FORM III
PERSONNEL SCHEDULE

NOAA/NMFS

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#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
1.	A. Coan	Supvy Math. Stat.	GS-12/5	100	8L1C1AW1
2.	A. Majors	Fish. Biol. Gen.	GS-09/8	100	8L1C1AW1
3.	C. Perrin	Comp. Systems Prog.	GS-11/5	100	8L1C1AW1
4.	A. Jackson	Biol. Tech. Fish.	GS-09/4	100	8L1C1VW2
5.	K. Wallace	Comp. Prog. Analyst	GS-11/6	100	8L1C1VW2
6.	R. Rasmussen	Biol. Tech.	GS-08/3	100	8L1C1VW2
7.	M. Trianni	Biol. Tech. Fish.	GS-06/1	100	8L1C1VW2

MILESTONE ARRAY

FORM IV		NOAA/NMFS		FMC		REF.NO.		PAGE							
MILESTONE ARRAY				SWC		057		4 of 5							
						FY 88		89 90							
TASK #	S	E	M	MAJOR MILESTONES, ACTIVITIES, AND EVENTS				1	2	3	4	1	2	1	2
	Q	A	E								S			S	S
8L1C1AW1	1	A		Update Atlantic tropical tuna data bases											
8L1C1AW1	2	A		Develop and maintain data bases for Pacific Ocean and Indian Ocean tunas and other large pelagics				O		S	O	S	O	S	
8L1C1AW1	3	A		Collect data from fisheries for tunas and large pelagics in the Pacific and Indian Oceans				O		S	O	S	O	S	
8L1C1AW1	4	E		Plan for the collection of fisheries data under the South Pacific Regional Tuna Treaty				O	J						
8L1C1AW1	5	M		Produce report summarizing data for the 1987 North and possibly South Pacific albacore fisheries						J		J		J	
8L1C1AW1 8L1C1VW2	6	A		Provide PFRD and FMMID with software and hardware support				O		S	O	S	O	S	
8L1C1VW2	7	A		Produce comprehensive data base edits in support of porpoise observer data analyses				O		S	O	S	O	S	
8L1C1VW2	8	A		Develop new bases and maintain existing data bases for marine mammals				O		S	O	S	O	S	

MILESTONE ARRAY

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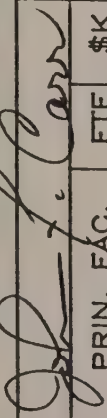
FY 88		89		90
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FORM 1
PLAN SUMMARY

NOAA/NMFS

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APPROVAL SIGNATURE 



TITLE

PRIN. FAC.

FTE

UNIT LEADER

LINE ITEM NAME

Underutilized Fisheries Resources

Tiburón

1.9

S. Kato

Resource Information

A. PROBLEM STATEMENT/OBJECTIVE: Much of the groundfish resources of the West Coast are being harvested at maximal levels. In order to increase production in our fisheries, we need to turn to presently underutilized fishes, including those that are currently taken but discarded at sea. The main objective of this task is to increase the productivity of our fishing industry by promoting the use of underutilized resources and by increasing the efficiency of harvesting and processing methods. A second objective is to minimize the effects of fishing activity on protected species.

B. METHODOLOGY/APPROACH: We research the fishery potential of various underutilized species, with emphasis on groundfish, by conducting field and laboratory trials of fishing and processing methods, along with marketing studies. We also investigate aspects of the life histories of candidate species, especially with regard to their distribution and availability. Alternative fishing methods are studies to increase productivity through greater efficiency (increased catch rates, lower overall costs, or greater catches), and to allow fishermen to optimize their fishing strategies. These studies are also designed to decrease gear conflicts among fishermen, as well as to reduce impact on incidentally caught species, particularly marine mammals, birds, and unwanted groundfish (e.g., small individuals of commercially valuable species).

C. PRODUCT/SERVICES: The principal products are reports, published in appropriate journals, describing our findings about the feasibility of development of fisheries for underutilized species, and on aspects of harvesting, handling, processing and marketing those species

D. CLIENTS: Members of the fishing industry are the primary users of the output of this Task. Fishermen, processors, brokers and retailers use the information as well as the fishes made available through activities of the Task. Fishery managers, legislators, advisory personnel, scientific colleagues, the media, and the general public also depend upon our expertise in many areas relating to fisheries development, underutilized species and gear development.

E. CONTRACTS: Construction and maintenance of fishing gear, 1.0K.

FORM II

NOAA/NMFS

CYOP - RESOURCE SUMMARY

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TITLE ☐ Underutilized Fisheries ResourcesHQ CONTACT(S) ☐

TASK NAMES▷	Same as Title					▽
OBJECT CLASS	TASK#1	TASK#2	TASK#3	TASK#4	TOTALS	
	8L1A6PNO	8L1C1ADP				
DIRECT LABOR	89.1				89.1	
PERS.BENEFITS	13.8				13.8	
TRAVEL	4.3				4.3	
TRANSPORTATION	0.3				0.3	
RENT,COMM.,UTIL.	0.5				0.5	
PRINT/REPROD.	1.5				1.5	
CONTRACTS	1.0				1.0	
SUPPLIES/MATERIALS	4.2	3.5			7.7	
EQUIPMENT	3.0	4.0			7.0	
GRANTS	-				-	
OTHER	-				-	
TOTALS▷	117.7	7.5			125.2	
FTE (FTP)	1.9				1.9	
FTE (OTFTP)						

VESSELS

SEA DAYS ALLOC.

0

NOAA

CHARTERS

COST OF CHARTERS

FREE DAYS

0

CROSS REFERENCES

FORM III

NOAA/NMFS

PERSONNEL SCHEDULE

FMC	REF.NO.	PAGE
SWC	061	3 of 4

#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
1.	Susumu Kato	Fishery Biologist	GM 14	100	8L1A6PNO
2.	Susan E. Smith	Fishery Biologist	GS 11/05	90	"

NOAA/NMFS

MAJOR MILESTONES, ACTIVITIES, AND EVENTS

[illegible]

FORM I
PLAN SUMMARY

NOAA/NMFS

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APPROVAL SIGNATURE				
TITLE	PRIN. FAC.	FTE	\$K	UNIT LEADER
Groundfish Analysis Investigation	Tiburon	8.75	372.8	W. Lenarz
LINE ITEM NAME				

A. PROBLEM STATEMENT/OBJECTIVE: Provide technical information to form a rational basis for the management of groundfish off Washington, Oregon and California.

B. METHODOLOGY/APPROACH: Participate on Groundfish Management Team of Pacific Fisheries Management Council (staff member is currently chair). Participate in cooperative port sampling program for groundfish landings (staff ages samples, performs data compilations and provides modest assistance in sampling) with three states. Use standard stock assessment techniques for groundfish, e.g., cohort analysis. Develop new assessment techniques and management models with emphasis on the multispecies nature of the fishery. Currently a five species rockfish management model is near completion. Conduct research cruises on the distribution and abundance of juvenile rockfish. Integrate results of juvenile rockfish recruit work with oceanographic and satellite data to predict year-class strength, obtain a better understanding of the recruitment progress and obtain an understanding of the ecology of juvenile rockfish. Begin work on bio-social-economic model of groundfish fisheries using adaptive management approach.

C. PRODUCT/SERVICES: Reports of Groundfish Management Team, annual stock assessment reports, compilations of port sample data, talks at scientific meetings and peer-reviewed scientific papers.

D. CLIENTS: Pacific Fisheries Management Council, NMFS Regions, fishing industry and scientists from other facilities.

E. CONTRACTS: California State University at San Francisco, 30.0K, IPA agreement covering Dr. R. Larson.

FORM II

NOAA/NMFS

CYOP - RESOURCE SUMMARY

DATE	10/20/87		
FMC	REF.NO.	PAGE	
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TITLE ☐ Groundfish Analysis InvestigationHQ CONTACT(S) ☐TASK NAMES ☐

TASK NAMES	Same as Title	TASK#1	TASK#2	TASK#3	TASK#4	▽
		8L1C2AM0				
OBJECT CLASS						TOTALS
DIRECT LABOR	267.2					267.2
PERS.BENEFITS	41.4					41.4
TRAVEL	8.4					8.4
TRANSPORTATION	.2					.2
RENT,COMM.,UTIL.	.2					.2
PRINT/REPROD.						
CONTRACTS	30.3					30.3
SUPPLIES/MATERIALS	11.2					11.2
EQUIPMENT	13.9					13.9
GRANTS						
OTHER						
TOTALS ☐	372.8					372.8
FTE (FTP)	8.75					8.75
FTE (OTFTP)						

VESSELS

SEA DAYS ALLOC.

46

NOAA

46

CHARTERS

COST OF CHARTERS

FREE DAYS

CROSS REFERENCES

FORM III

NOAA/NMFS

PERSONNEL SCHEDULE

FMC	REF.NO.	PAGE
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#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
1.	William Lenarz	Fishery Biologist	GM 14	100	8L1C2AM0
2.	Edward Ueber	Industry Economist	GS 12/07	100	"
3.	Joseph Hightower	Fishery Biologist	GS 12/03	100	"
4.	William Leet	Fishery Biologist	GS 12/10	100	"
5.	Tina Wylie Echeverria	Fishery Biologist	GS 11/05	75	"
6.	Carol Reilly	Biological Technician	GS 7/05	100	"
7.	David Woodbury	Biological Technician	GS 7/02	100	"
8.	Donald Pearson	Biological Technician	GS 4/03	100	"
9.	Anne McBride	Biological Technician	GS 4/02	100	"

NOAA/NMFS

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FORM I PLAN SUMMARY

NOAA/NMFS

FMC	REF.NO.	PAGE
SWC	064	1 of 4

APPROVAL SIGNATURE  PRIN. FAC. FTE \$K UNIT LEADER LINE ITEM NAME

TITLE
Groundfish Communities

Tiburon 6.0 224.7 E. Hobson

Resource Information

A. PROBLEM STATEMENT/OBJECTIVE: This task addresses the problem of identifying the effects of natural change in the marine environment on the distribution, abundance and relative year-class strength of important groundfish species. Understanding these effects is necessary if we are to recognize the effects of fisheries or other activities of our society on these species or their habitats.

B. METHODOLOGY/APPROACH: The effects of both regular (e.g., seasonal) and irregular (e.g., catastrophic storms, El Ninos) are measured at established sites nearshore in both warm-temperate southern California and cold-temperate northern California (thus involving the two major coastal marine systems of western United States) and also at varying locations on the deep slope of the continental shelf. Emphasis is on how these changes affect interspecific relations, especially those between predators and prey, and how they influence relative numbers of young-of-the-year. Regular assessments of the biota are made with a variety of collecting devices, and visually when feasible. Trophic relations are determined by visual observations and comprehensive study of gut contents. Results are subjected to rigorous peer review.

C. PRODUCT/SERVICES: Major products are published papers and stock-assessment documents presented to the Pacific Fisheries Management Council.

D. CLIENTS: Clients include fishery managers, Pacific Fisheries Management Council, researchers, and others with need (or interest) to understand the dynamics of marine ecosystems.

E. CONTRACTS: None.

FORM II

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CYOP - RESOURCE SUMMARY

DATE	10/20/87	
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TITLE

Groundfish Communities

HQ CONTACT(S)

TASK NAMES

OBJECT CLASS	Same as Title	TASK#1	TASK#2	TASK#3	TASK#4	TOTALS
	TASK#1 8L1A3AP0					
DIRECT LABOR	182.8					182.8
PERS.BENEFITS	28.7					28.7
TRAVEL	4.5					4.5
TRANSPORTATION						
RENT, COMM., UTIL.						
PRINT/REPROD.	0.5					0.5
CONTRACTS						
SUPPLIES/MATERIALS	6.2					6.2
EQUIPMENT	2.0					2.0
GRANTS						
OTHER						
TOTALS	224.7					224.7
FTE (FTP)	6.0					6.0
FTE (OTFTP)						

VESSELS

SEA DAYS ALLOC.

NOAA

CHARTERS

COST OF CHARTERS

FREE DAYS

CROSS REFERENCES

FORM III

NOAA/NMFS

PERSONNEL SCHEDULE

FMC	REF.NO.	PAGE
SWC	064	3 of 4

#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
1.	Peter B. Adams	Fishery Biologist	GS 12/05	100	8L1A3AP0
2.	James R. Chess	Fishery Biologist	GS 12/06	100	"
3.	Edmund S. Hobson	Fishery Biologist	GM 14	100	"
4.	Daniel F. Howard	Biological Technician	GS 7/03	100	"
5.	Wayne M. Samiere	Biological Technician	GS 5/2	100	"
6.	Kelly Silberberg	Biological Technician	GS 5/01	100	"

NOAA/NMFS

NOAA/NMFS

NOAA/NMFSNOAA/NMFS

FORM I PLAN SUMMARY

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APPROVAL SIGNATURE

TITLE

PRIN. FAC.

FTE

\$K

UNIT LEADER

LINE ITEM NAME

Physiological Ecology of Pacific Coast Groundfishes

Tiburón

5

274.5

J. Whipple

Info. Analysis & Dissemination

A. PROBLEM STATEMENT/OBJECTIVE: Efficient management requires understanding of how environmental and management factors effect fish stocks. This task examines the functional relationships between fishes and their host environments. Research consists of multidisciplinary, integrated studies designed to determine the inherent and environmental factors most affecting health (condition), growth, behavior, and reproduction in important groundfish populations. The overall goal is to understand, describe and explain how fish respond to changes in habitats and the implications these interactions have for management. The specific goal is to contribute to the assessment of stocks and to forecast recruitment several years in advance.

B. METHODOLOGY/APPROACH: Research includes comprehensive examinations and analyses of adult and juvenile specimens collected from commercial and sport groundfish fleets, from chartered fishing vessels and from cruises aboard the NOAA ship, David Starr Jordan. Efforts are focused on important rockfish species: yellowtail, bocaccio and widow (Sebastes flavidus, S. paucispinis, S. entomelas).

Scientific information from analyses and supportive laboratory experiments are used to determine the most important characteristics of condition and reproduction to form measures of health and effective fecundity. Studies will include examinations of gametogenesis and reproductive system development, proximate analyses of tissue, estimates of potential parasite, and malformation and determination of lipid and gonadal steroid cycles.

Results of the research are being combined with oceanographic and other environmental data in order to determine environmental factors affecting condition, reproductive variability and capacity and to place the species populations in the context of their habitats.

C. PRODUCT/SERVICES: Products of this research include written scientific reports and manuscripts, presentations at meetings, conferences, lectures, seminars and special gatherings. The products should contribute to the efficiency and long-term viability of the fishery. Secondary outcomes are expected to provide managers an efficient means to monitor the health of different stocks, year-class production, and to determine factors producing poor fishery products.

D. CLIENTS: Primary users of research products are managers of the PFMC and other management elements concerned with groundfish fishery. Other users include researchers and fishery managers who need to know how fish growth, survival and reproduction is affected by management and environmental factors.

E. CONTRACTS: University of California at Davis receives approximately \$2K for pathological analyses. The F/V New Sea Angler receives \$12K in payment for charter services to collect specimens.

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CYOP - RESOURCE SUMMARY

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TITLE > Physiological Ecology of Pacific Coast Groundfishes

HQ CONTACT(S) >

TASK NAMES >	Same as Title	TASK#1	TASK#2	TASK#3	TASK#4	▽
OBJECT CLASS		TASK#1 8L1A3AT0				TOTALS
DIRECT LABOR	202.5					202.5
PERS.BENEFITS	32.1					32.1
TRAVEL	3.0					3.0
TRANSPORTATION	0.5					0.5
RENT,COMM.,UTIL.	3.0					3.0
PRINT/REPROD.	0.5					0.5
CONTRACTS	14.0					14.0
SUPPLIES/MATERIALS	11.4					11.4
EQUIPMENT	7.5					7.5
GRANTS						
OTHER						
TOTALS >	274.5					274.5
FTE (FTP)	6					
FTE (OTFTP)						

VESSELS	
# SEA DAYS ALLOC.	
NOAA	CHARTERS
COST OF CHARTERS	
# FREE DAYS	
CROSS REFERENCES	

FORM III

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PERSONNEL SCHEDULE

#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
1.	Michael J. Bowers	Fishery Biologist	GS 7/05	100	8L1A3AT0
2.	Maxwell B. Eldridge	Fishery Biologist	GM 13	100	" "
3.	Brian M. Jarvis	Biological Technician	GS 8/08	100	" "
4.	R. Bruce MacFarlane	Oceanographer	GS 12/06	100	" "
5.	Elizabeth C. Norton	Biological Technician	GS 15/01	100	" "
6.	Jeannette A. Whipple	Fishery Biologist	GM 14	100	" "

FORM I PLAN SUMMARY

NOAA/NMFS

APPROVAL SIGNATURE	PRIN. FAC.	FTE	\$K	UNIT LEADER	FMC		PAGE
					SWC	089	
TITLE					LINE ITEM NAME		
Fishery Management Research Task	Honolulu Lab.	6.0	373.0	S. G. Pooley	Information Analyses and Dissemination		

A. PROBLEM STATEMENT/OBJECTIVE: The Fishery Management Research Task is the SWFC Honolulu Laboratory's focal point for providing scientific information to the Western Pacific Regional Fishery Management Council on management of the fishery resources.

B. METHODOLOGY/APPROACH: Work in the Task is divided into two categories. (1) Fishery Monitoring involves the collection of fishery and economic data for both Magnuson Fishery Conservation and Management Act (MFCMA) related insular fisheries as well as for tuna fisheries. Specifically, this includes determining the size and species composition of market landings, collecting logbooks from MFCMA regulated fisheries, other non-regulated fisheries, and contractual collection of primarily tuna related data from fisheries in the South and western Pacific islands. (2) Fishery Economic Research involves cost-earnings of studies of vessels, investigation of wholesale and retail markets, conducting recreational valuation studies, and evaluating limited entry schemes in terms of western Pacific medium to small scale but high value fisheries.

C. PRODUCT/SERVICES:

The primary users of the Task's output are the WPRFMC, the NMFS policymakers, and state and territorial fisheries staffs, university scientists, and others concerned with managing fishery resources within the U.S. Fishery Conservation Zone. Industry groups also request information on the status of fishery stocks, their management, and potential for development.

D. CLIENTS:

Fisheries managers use Task products in program planning, fishery management, and fishery development. The major uses relate to MFCMA, particularly in determining the need for management under the MFCMA, for developing fishery management plans, and evaluating the efficacy of existing management measures. Industry groups also use the information in consideration of plans to enter a fishery or expand existing operations.

E. CONTRACTS:

Equipment repair/maintenance.

FORM 1
PLAN SUMMARY

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APPROVAL SIGNATURE 

TITLE

Kewalo Research Facility

PRIN. FAC.

Honolulu

UNIT LEADER

R. F. Sumida

LINE ITEM NAME

Information analyses and
Dissemination

FTE

0

\$K

76.0

A. PROBLEM STATEMENT/OBJECTIVE: The Kewalo Research Facility (KRF) task supports other tasks at the Honolulu Laboratory by providing the physical plant for research on monk seals, tunas, bottom fishes, and other marine species. Examples of projects conducted at the KRF include escape panel research for the lobster fishery, the spawning and rearing of tunas and other pelagic species in captivity for assessing effects of environmental factors on larval survival and growth, female monk seal pup rehabilitation under the Endangered Species Act of 1973. KRF is the main staging area for all gear storage/preparation, etc., for the Townsend Cromwell cruises.

B. METHODOLOGY/APPROACH:

The research projects of the various tasks at the Honolulu Laboratory who use the KRF are designed to provide information for the improvement of biological models used as a basis for monitoring, management, and development of various fisheries.

C. PRODUCT/SERVICES:

Results of these research are used by fishery scientists and resource managers to produce more accurate assessments and management analyses

D. CLIENTS:

The results of all research done at the KRF support the needs of NMFS policymakers, Western Pacific Regional Fishery Management Council, and island governments throughout the Pacific region.

E. CONTRACTS:

Refuse collection.

FORM II

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CYOP - RESOURCE SUMMARY

DATE	October 20, 1987	
FMC	REF.NO.	PAGE
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TITLE ☐ Fishery Management Research TaskHQ CONTACT(S) ☐

TASK NAMES ☐	TASK#1	TASK#2	TASK#3	TASK#4	▽
OBJECT CLASS	TASK#1	TASK#2	TASK#3	TASK#4	TOTALS
	8L1C2AP0	8L1C2AP1			
DIRECT LABOR	253.8	10.9			264.7
PERS.BENEFITS	32.5	1.4			33.9
TRAVEL	4.8	--			4.8
TRANSPORTATION	--	--			--
RENT,COMM.,UTIL.	0.1	58.2			58.3
PRINT/REPROD.	--	--			--
CONTRACTS	2.2	2.0			4.2
SUPPLIES/MATERIALS	2.2	2.5			4.7
EQUIPMENT	1.4	1.0			2.4
GRANTS	--	--			--
OTHER	--	--			--
TOTALS ☐	297.0	76.0			373.0
FTE (FTP)	6.0	--			6.0
FTE (OTFTP)	3.2	.75			3.95

VESSELS	
#	SEA DAYS ALLOC.
NOAA	CHARTERS
COST OF CHARTERS	
# FREE DAYS	
CROSS REFERENCES	

PERSONNEL SCHEDULE

FMC	REF.NO.	PAGE
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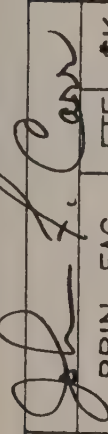
#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
FTP					
1	Samuel G. Pooley	Industry Economist	GS/12/05	100.00%	8L1C2AP0
2	Ray F. Sumida	Supervisory Fishery Biologist General	GS/11/07	100.00%	8L1C2AP0
3	Gordon S. Yamasaki	Fishery Biologist	GS/07/10	100.00%	8L1C2AP0
4	Shoji Teramoto	General Facilities & Equip. Specialist	GS/07/08	100.00%	8L1C2AP0
5	Raymond P. Clarke	Biological Technician	GS/06/02	100.00%	8L1C2AP0
6	Vacant (vice Honda)	Biological Technician	GS/06/01	100.00%	8L1C2AP0
PTP					
7	Kurt E. Kawamoto	Biological Technician Fisheries	GS/06/01	96.00%	8L1C2AP0
TEMPORARIES					
8	Ann C. Todoki	Computer Programmer	GS/05/01	100.00%	8L1C2AP0
9	John J. Czyz	Computer Clerk	GS/04/01	70.00%	8L1C2AP0
10	Vacant (vice Higuchi)	Biological Aid	GS/04/01	50.00%	8L1C2AP0
11	Lance S. Asagi	Biological Aid	GS/03/01	75.00%	8L1C2AP1

NOAA/NMFS

MAJOR MILESTONES, ACTIVITIES, AND EVENTS

[illegible]

FMC	REF.NO.	PAGE
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APPROVAL SIGNATURE 

TITLE

Commercial and Recreational
Fisheries Research for Management

PRIN. FAC.

La Jolla, CA

UNIT LEADER

D.D. Huppert

\$K

432.2

FTE

7.0

LINE ITEM NAME

A. PROBLEM STATEMENT/OBJECTIVE: Biological and economic information is needed for fishery to FMPs, other management information management. Research products needed include contributions improvements in stock assessments, economic information on status of commercial fisheries, evaluations of alternative management strategies, and economic evaluations of marine recreational fisheries. Planning and management of the joint SWC/SWR socio-economic fund is also needed.

B. METHODOLOGY/APPROACH: Task biologists utilize historical data bases (CalCOFI, CDFG sea survey, and special SWFC survey and port samples) in conjunction with quantitative analytical models to estimate stock sizes, investigate the population dynamics and sustainable yields, and to evaluate alternative biological aspects of management strategies.

Task economists use data on prices, catches, fishing fleet characteristics, fishing costs, and recreational fishing surveys to assess fishing fleet productivity, evaluate alternative management regulations, and assess economic characteristics of marine recreational fishing.

Program personnel also (1) plan and participate directly in some seagoing data collection efforts (e.g., surveys of west coast groundfish) and (2) plan and monitor economics data collection (e.g., fishing vessel cost and earnings data).

C. PRODUCT/SERVICES: Abundance estimates for northern anchovy, Dover sole, and Pacific mackerel. Improved stock assessment techniques. Annual fishery status report for coastal pelagics, and major contributions to reports of Pacific coast groundfish and tuna fisheries. Economic data and analyses of recreational marine fishing; and detailed techniques for economic valuation and productivity measurement. Contaminant/fish population interaction assessment.

D. CLIENTS: Information and reports generated in this program are used by (1) the Pacific Fishery Management Council, (2) State-Federal cooperative management efforts, (3) U.S. government agents in tuna fisheries currently or prospectively under international management, (4) U.S. representatives in international fisheries investigations (e.g., Mexico-Pacifico, ICES working group on sardines and mackerel, Spanish SARP), and (5) other public groups concerned with nearshore ocean management.

E. CONTRACTS: (1) Collection of Recreational Economics Data in Southern California, (2) a profile of swordfish/shark products and markets, and (3) extension of economics analysis of FMP-regulated fisheries in the western Pacific.

FORM II

NOAA/NMFS

CYOP - RESOURCE SUMMARY

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TITLE	Commercial and Recreational Fisheries Research for Management
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HQ CONTACT(S)	
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TASK NAMES	Socio-economics Fund	Management Research	TASK#3	TASK#4	TOTALS
OBJECT CLASS	TASK#1	TASK#2			
DIRECT LABOR	16	232.5			248.5
PERS.BENEFITS	4.7	37.2			41.9
TRAVEL	0	8.0			8.0
TRANSPORTATION	0	0			
RENT,COMM.,UTIL.	0	6.0			6.0
PRINT/REPROD.	1.0	2.5			3.5
CONTRACTS	116.0	0.0			116.0
SUPPLIES/MATERIALS	2.3	3.0			5.3
EQUIPMENT	0	3.0			3.0
GRANTS	0	0			
OTHER	0	0			
TOTALS	140.0	292.2			432.2
FTE (FTP)		5.5			5.5
FTE (OTFTP)	0.5	1.0			1.5

VESSELS	
# SEA DAYS ALLOC.	
NOAA	CHARTERS
COST OF CHARTERS	
# FREE DAYS	
CROSS REFERENCES	

FORM III

NOAA/NMFS

PERSONNEL SCHEDULE

FMC	REF.NO.	PAGE
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#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
1.	Daniel Huppert	Industry Economist	GM 14/0	100%	8L1C2ASO
2.	Alec MacCall	Supv. Fish. Biologist	GM 13/0	100%	8L1C2ASO
3.	Richard Methot	Fishery Biologist	GS 13/1	25%	8L1C2ASO
4.	Sam Herrick	Industry Economist	GS 12/7	100%	8L1C2ASO
5.	Dale Squires	Industry Economist	GS 11/4	100%	8L1C2ASO
6.	Cindy Thomson	Industry Economist	GS 11/1	100%	8L1C2ASO
7.	Kevin Carlson	Industry Economist	GS 7/1	25%	8L1C2ASO
8.	Jeffery Lee	Industry Economist	GS 4/1	50%	8L1C2AS2
9.	Tim Ragen	Fish. Biologist	GS 5/1	25%	8K3A8280
10.	Vacant	Fish. Biologist	GS 11/1	75%	8L1C2ASO

FORM IV

NOAA/NMFS

MILESTONE ARRAY

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TASK#	SEQ	MAE	MAJOR MILESTONES, ACTIVITIES, AND EVENTS	FY 88 89 90											
				1	2	3	4	1	2	1	2				
8LIC2AS0	1	A	Acquire Mexican anchovy fishery data through contract or cooperative agreement	0		A									
"	2	A	Estimate 1988 anchovy biomass (without egg production data)			M	J								
"	3	M	Report 1988 anchovy biomass to SWR			J									
"	4	A	Contribute to annual wetfish fleet status report			M	J								
"	5	M	Release Tech. Memo. on wetfish fleet status to public and PFMC			J									
"	6	A	Assist CDF&G with stock assessments of Pacific sardine and Pacific mackerel as requested	0			S	0	S	0	S				
"	7	A	Assist Regional Office with analysis of salmon fishery as requested	0			S	0	S	0	S				
"	8	E	Publish book on "The Dynamic Geography of Marine Fish Populations"	0		J									
"	9	E	Chair ICES Sardine Working Group and produce report			M									
8LIC2AS2	10	A	Expand commercial fleet cost data base from internal NMFS information. Develop microcomputer input and storage formats			M								M	M
8LIC2AS0	11	A	Update and improve groundfish fleet price, cost, and productivity indices	0			S	0	S	0	S				
"	12	E	Prepare a summary document describing the southern California portion of the groundfish fishery				S								

MILESTONE ARRAY

FMC	REF.NO.	PAGE
SWC	091	5 of 7

			MAJOR MILESTONES, ACTIVITIES, AND EVENTS										FY 88		89		90					
TASK#	SEQ	MAE											1	2	3	4	1	2	1	2		
8L1C2AS0	13	A	Explore and document alternative formulae for allocating IFQ's among individual groundfish vessels, starting with sablefish and rockfish										0			S	O					
"	14	E	Make periodic presentations to PFMC's Committee on groundfish limited access										0	J	A	J						
"	15	A	Further develop and support economic research for groundfish management (mesh size analysis, trawl vessel cost analysis, set net fleet analysis, sablefish value by size analysis)												0							
"	16	E	Prepare and distribute report on economic aspects of Pacific coast groundfish regulations																M			
"	17	A	Assist CDF&G with stock assessments of groundfish (e.g., California halibut) as requested										0				S	O	S	O	S	
"	18	A	Assist in design, execution, and analysis of surveys for Dover sole and sablefish in central California										0				S					
8L1C2AS2	19	A	Collect information necessary for compiling annual trade summary in cooperation with PFRD and SWR																			
8L1C2AS0	20	A	Provide tuna fleet price, cost, output, and productivity indices for annual report														M	A	M	M		
"	21	E	Co-author tuna trade summary Tech. Memo.																			

MILESTONE ARRAY

FMC	REF.NO.	PAGE
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TASK#	S E Q	M A E	MAJOR MILESTONES, ACTIVITIES, AND EVENTS	FY 88	89	90
8LLC2AS0	22	A	Work with representatives of Mexican and international agencies to develop economic indices of tuna fleet performance.	1	2	3
"	23	E	Make presentation to CICESE in Ensenada			
"	24	A	Develop multidimensional southern California swordfish/shark drift gill net data summary and analysis using PACFIN and fishing vessel cost data base	0	M	
"	25	A	Identify and analyze management and policy issues in gill net fishery	D	A	
"	26	E	Prepare and distribute report on commercial gill net fishery; extent, economic value and impact	J		
8LLC2AS2	27	A	Develop RFP, select contractor, and monitor study of swordfish and shark product quantities and markets	0	M	
8LLC2AS0	28	A	Complete statistical analysis of survey data collected for BASES	0	A	
"	29	E	Submit for publication a paper presenting estimates of travel-cost type demand models		A	
"	30	A	Design survey approach and instrument for a Southern California recreational economics survey	J	A	
8LLC2AS2	31	E	Issue contract to collect MRF economics survey data in southern California	J		
"	32	A	Monitor contract MRF data collection	J		J

NOAA/NMFS

NOAA/NMFS

NOAA/NMFSNOAA/NMFS

FORM I
PLAN SUMMARY

NOAA/NMFS

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APPROVAL SIGNATURE



TITLE

Fishery/Environmental Climatology, Model-
ling and Forecasting

PRIN. FAC.

Monterey, CA

FTE

12.25

\$K

581.8

UNIT LEADER

A. Bakun

LINE ITEM NAME

A. PROBLEM STATEMENT/OBJECTIVE:

A. This task addresses the problem of determining the effects of climatic and other environmental processes on living marine resources. Understanding the natural variability of populations is a prerequisite to predicting the effects of man's exploitation of the marine ecosystem.

B. METHODOLOGY/APPROACH:

B. Assuming appropriations similar to 1987 we plan to fill our two vacant physical oceanographer positions which will allow us to begin to restore our technical capabilities to the 1983 level. We also intend to complete multiyear studies on the relationships between environmental conditions and the albacore fishery and between environmental conditions and the condition factors of California Current pelagic fishes. Fiscal 1988 will therefore primarily be devoted to completing work in progress and to a large training and program rebuilding element to prepare the task so that we will be able to respond to the major environmental data needs which will be required by the ecosystem initiative.

C. PRODUCT/SERVICES:

C. The principal products of the task are oceanographic and meteorological data, climatology and time series analyses, fishery/environmental analyses, development of parameter estimations for population dynamics, and fishery/environmental modeling.

D. CLIENTS:

D. The primary clients are NMFS, state, and university fishery and oceanographic research programs; secondary clients include both state and federal regulatory agencies.

E. CONTRACTS:

E. The task has 31.6K in a data file maintenance contract with Compass Systems.

FORM II

NOAA/NMFS

CYOP - RESOURCE SUMMARY

DATE	15 Oct 87	
FMC	REF.NO.	PAGE
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TITLE > Fishery/Environmental Climatology, Modelling & Forecasting

HQ CONTACT(S) >

TASK NAMES >	PFEQ	TASK#1	TASK#2	TASK#3	TASK#4	▽
OBJECT CLASS	TASK#1	TASK#2	TASK#3	TASK#4	TOTALS	
	8LLC5BTO					
DIRECT LABOR	418.7				418.7	
PERS.BENEFITS	67.0				67.0	
TRAVEL	12.0				12.0	
TRANSPORTATION	---				---	
RENT,COMM.,UTIL.	9.5				9.5	
PRINT/REPROD.	3.0				3.0	
CONTRACTS	36.7				36.7	
SUPPLIES/MATERIALS	13.9				13.9	
EQUIPMENT	9.0				9.0	
GRANTS	---				---	
OTHER Computer	12.0				12.0	
TOTALS >	581.8				581.8	
FTE (FTP)	9.0				9.0	
FTE (OTFTP)	3.25				3.25	

VESSELS	
# SEA DAYS ALLOC.	
0	
NOAA	CHARTERS
0	0
COST OF CHARTERS	
0.00	
# FREE DAYS	
0	
CROSS REFERENCES	

FORM III

NOAA/NMFS

PERSONNEL SCHEDULE

FMC	REF.NO.	PAGE
SWC	092	3 of 5

#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
1	Bakun, A.	Supervisory Oceanographer	GM/15/0	100	8L1C5BT0
2	Parrish, R.	Fisheries Biologist (Research)	GM/14/0	100	8L1C5BT0
3	Mendelssohn, R.	Operations Research Analyst	GS/13/7	100	8L1C5BT0
4	Sund, P.	Oceanographer	GS/13/0	100	8L1C5BT0
5	Husby, D.	Oceanographer	GS/12/7	100	8L1C5BT0
6	Mallicoate, D.	Statistician	GS/11/3	100	8L1C5BT0
7	Norton, J.	Oceanographer	GS/11/7	100	8L1C5BT0
8	Nichols, T.	Administrative Support Clerk	GS/5/1	100	8L1C5BT0
9	Mason, J.	Fishery Biologist	GS/5/4	50	8L1C5BT0
10	Garrett, L.	Fishery Biologist	GS/5/1	100	8L1C5BT0
11	Hughes, M.	Clerk-Typist	GS/4/1	50	8L1C5BT0
12	Baird, K.	Biological Aide	GS/4/1	25	8L1C5BT0
13	Vacant	Oceanographer	GS/11/1	100	8L1C5BT0
14	Vacant	Oceanographer	GS/9/1	100	8L1C5BT0

FORM IV

NOAA/NMFS

MILESTONE ARRAY

FMC	REF.NO.	PAGE
SWC	092	4 of 5

TASK#	S E Q	M A E	MAJOR MILESTONES, ACTIVITIES, AND EVENTS	FY	88	89	90
III-1	1	A	Production of environmental index series for the California Current (and other) habitat (monthly updates, mailings, etc.).	1	2	3	4
III-1	2	E	Diagnostic study of recent events in the California Current (1986-87 "Little" El Nino, etc.) - CalCOFI presentation and publication.	X			
III-1	3	A	Development, production, evaluation, and time/space analysis of an expanded suite of California Current environmental signals.		J		
III-1	4	A	PFEG-Tiburon cooperative research on rockfish recruitment/environment relation-ships	X			
III-1	5	A	Development of enhanced theoretical framework for investigating physical-bio-logical interaction in the ocean.	X			
III-1	6	E	Chapter in Troadec volume - "Recruitment Variation, the Oceanographer's View" - submitted for publication.	X			
III-1	7	E	Paper on adaptive nature of physically-forced population variability (including connotations of bottom-trapped structures, etc.) - submitted for publication.	D			
III-1	8	E	Analysis of the Monterey Bay party boat fishery, 1959-86 - M.S. Thesis at Moss Landing Marine Laboratory.		S		
III-1	9	A	Development of improved mathematical methodologies for fishery/environmental empirical analysis and modelling.		A		
III-2	10	A	Cooperative identification and interregional comparative evaluation of empirical environment/recruitment models.	X			
III-2	11	M	Analysis of Brazil Current sardinella and Falkland Current anchovy reproductive habitat climatology - submitted for publication	X			
III-2	12	E	Report on age composition and recruitment variability in jack macherel, 1977-83 - submitted for publication		J		
					S		

NOAA/NMFS

MAJOR MILESTONES, ACTIVITIES, AND EVENTS

TASK#	S E Q	M A E	MAJOR MILESTONES, ACTIVITIES, AND EVENTS	FY 87	FY 88	FY 89	FY 90
III-2	13	A	Development of 'paleo' population and environmental info. for analysis of interactions of regime (and longer time scale fish population) and climatic changes	1	2	3	4
III-3	14	A	PFEG-Honolulu cooperation on insular recruitment issues (bottom trapped structures, seamount oceanography, etc.)	X	-----	-----	X
III-6	15	E	Completion of development and evaluation of environment-dependent albacore fishery forecast model - Book or series of papers submitted for publication	X	-----	-----	X
III-6	16	E	Report on albacore age structure and recruitment variability with respect to relationships with large-scale environmental factors.				S
III-6	17	M	Production of Albacore Research Information Document - Completed	N			
NMFS Antarctic Program	18	E	Multi-authored paper on relation between productivity and hydrography found in March '86 Weddell Sea Survey - completed	D			
"	19	E	Participation in 1988 Cruise to ice edge during austral winter		J	J	
"	20	E	Technical memo. on 1988 AMERIEZ Physical Oceanography				O
"	21	E	Journal paper on 1988 AMERIEZ results				J

FORM I
PLAN SUMMARY

NOAA/NMFS

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APPROVAL SIGNATURE

TITLE	PRIN. FAC.	FTE	\$K	UNIT LEADER	LINE ITEM NAME
Coastal Marine Mammals	SWC-La Jolla	3.0	166.8	Barlow, J.	Resource Information

A. PROBLEM STATEMENT/OBJECTIVE: This task investigates changes in coastal marine mammal populations associated with human activities (e.g. research, commercial fisheries, etc.). The task provides information so that the status of and effort of management on stocks of certain species can be determined, allowing NMFS to fulfill requirements under the Marine Mammal Protection Act.

B. METHODOLOGY/APPROACH: During FY88 this task is to census California sea lion and elephant seal rookies to investigate pup production and food habits, complete status of stocks reports for California harbor porpoise, sea lions, elephant seals, and harbor seals, complete data reports on bottlenose dolphins and pilot whales, and conduct "pollutant-ratio" studies on harbor porpoise and harbor seals to assess stock discretion.

C. PRODUCT/SERVICES: The information produced by this task will primarily be used by NMFS management personnel to 1) develop actions to protect stocks of California marine mammals from unnecessary fishery mortality; 2) determine allowable take for display purposes; and 3) evaluate the effects of incidental take of marine mammals by coastal fisheries on the health of overall ecosystems.

D. CLIENTS: Products provided by this task are used by NMFS offices charged with drafting measures to control the take of coastal marine mammals.

E. CONTRACTS:

1) CDF&G	25.0K	- Aerial survey of harbor porpoise
2) Private	2.5K	- Flight time for surveys of Channel Islands
3) Private	10.0K	- Harbor porpoise/harbor porpoise seal pollutant study

FORM II

CYOP - RESOURCE SUMMARY

NOAA/NMFS

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TITLE Coastal Marine Mammals

HQ CONTRACT(S)

TASK NAMES	TASK#1	TASK#2	TASK#3	TASK#4	TOTALS
OBJECT CLASS	811A5VR1				
DIRECT LABOR	94.0				94.0
PERS.BENEFITS	15.0				15.0
TRAVEL	4.2				4.2
TRANSPORTATION					
RENT, COMM., UTIL.					
PRINT/REPROD.					
CONTRACTS	37.5				37.5
SUPPLIES/MATERIALS	6.4				6.4
EQUIPMENT	7.2				7.2
GRANTS					
OTHER	2.5				2.5
TOTALS	166.8				166.8
FTE (FTP)	2.0				2.0
FTE (OTFTP)	1.0				1.0

VESSELS
SEA DAYS ALLOC.

NOAA CHARTERS

COST OF CHARTERS

FREE DAYS

CROSS REFERENCES

FORM III
PERSONNEL SCHEDULE

NOAA/NMFS

FMC	REF. NO.	PAGE
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#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
	Barlow, J.	Oper. Res. Analyst	GS/13	100	8L1A5VR1
	Lowry, M.	Fishery Biologist	GS/9/3	100	8L1A5VR1

MILESTONE ARRAY

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FY 88 | 89

[illegible]

APPROVAL SIGNATURE

TITLE	PRIN. FAC.	FTE	\$K	UNIT LEADER	LINE ITEM NAME
Survey Operations-MOPS	SWC-La Jolla	4.0	384.8	Holt, R.	Resource Information

A. PROBLEM STATEMENT/OBJECTIVE: This task is one of seven (SWC 8, 11, 12, 15, 57, 97, 98) associated tasks conducting research on dolphins associated with the U.S. tuna purse seine fishery in the eastern tropical Pacific Ocean (ETP). Collectively, these tasks collect and analyze fishery and biological data and provide information on biological impacts of management practices to NMFS, allowing the agency to fulfill its requirements under the Marine Mammal Protection Act (MMPA). This task is responsible for the data collection for the long-term (at least 5 years) monitoring program to determine trends in dolphin abundance.

B. METHODOLOGY/APPROACH: During FY 88 this task is to complete execution of the 1987 research vessel surveys (October through December) Survey activities include recording sightings of schools of dolphins and estimating numbers of individuals and species and length composition of schools. Logistical tasks such as staffing, equipment and supply purchases, contracting, observer training, and implementing experimental design procedures will be completed. During FY88 this task is to complete tasks to purchase a helicopter with spare parts and install it aboard the Jordan. In addition, the task will collect ancillary information needed to both measure dolphin abundance and to support research in related areas (e.g. distribution-ecology of dolphins, behavior of dolphin schools). Products of the task include cruise plans and announcements distributed according to standard SWFC policy. Records of sightings of schools and other data collected will be entered onto computer data bases and delivered to projects responsible for their analysis.

C. PRODUCT/SERVICES: Informations provided by the task is analyzed to detect changes in abundance of stocks of dolphin associated with the U.S. tuna fishery in the ETP. This and other information developed is used to 1) estimate trends in abundance of ETP stocks of dolphins associated with the fishery and 2) assess the effects of fishing on changes in abundance.

D. CLIENTS: Products of the task are used by tasks responsible for data analysis and by NMFS offices charged with determining management measures. Information generated by this task will be used by NMFS, Marine Mammal Commission, the U.S. tuna industry and environmental groups.

E. CONTRACTS:

1) Helicopter maintenance	88.4	-	Federal	-	OAD
2) Fuel	20.0	-	Federal	-	NOS
3) Mechanic	17.6	-	Federal	-	OAD
4) CAST instrumentation	6.0	-	Private		
5) Helicopter modification	2.0	-	Private		

FORM II

CYOP - RESOURCE SUMMARY

NOAA/NMFS

DATE 14 Oct 87

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TITLE Survey Operations

HQ CONTRACT(S)

TASK NAMES

OBJECT CLASS

TASK#1
8L1A6VW0

TASK#2

TASK#3

TASK#4

TOTALS

DIRECT LABOR

161.8

PERS.BENEFITS

29.2

TRAVEL

13.5

TRANSPORTATION

3.0

RENT, COMM., UTIL.

3.0

PRINT/REPROD.

3.0

CONTRACTS

134.0

SUPPLIES/MATERIALS

28.3

EQUIPMENT

13.0

GRANTS

13.0

OTHER

2.0

TOTALS

384.8

FTE (FTP)

0

FTE (OTFTP)

4.0

VESSELS

SEA DAYS ALLOC.

NOAA

CHARTERS

COST OF CHARTERS

FREE DAYS

CROSS REFERENCES

FORM III
PERSONNEL SCHEDULE

NOAA/NMFS

FMC	REF.NO.	PAGE
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#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
8L1A6VWO		(See SWC 8)			

MILESTONE ARRAY

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FY 88 89

TASK #	S E Q			M A E			MAJOR MILESTONES, ACTIVITIES, AND EVENTS											
							1	2	3	4	1	2	3	4				
8L1A6VWO																		

(See SWC 8)

FORM I
PLAN SUMMARY

NOAA/NMFS

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APPROVAL SIGNATURE

TITLE

Photographic & Remote Sensing

PRIN. FAC.

SWC-La Jolla

FTE

2.0

\$K

110.1

UNIT LEADER

Perryman, W.

LINE ITEM NAME

Resource Information

A. PROBLEM STATEMENT/OBJECTIVE: This task is one of seven (SWC 8, 11, 12, 15, 57, 97, 98) closely linked tasks involving research on dolphins associated with the eastern tropical Pacific & (ETP) tuna fishery. Collectively, these tasks collect and analyze fishery and biological data to provide information on biological impacts of management practices to NMFS, allowing the agency to fulfill its requirements under the Marine Mammal Protection Act (MMPA). This task is responsible for collecting and analyzing aerial photography data taken from ship-based helicopter. Specifically, this task is to provide the hardware and expertise to investigate school sizes of dolphins in the ETP. In addition, this task is closely associated with CYOP 96. It will collect imageries for determination of pup production at major rookeries for northern elephant seals, California sea lions, and northern fur seals in the California Channel Islands.

B. METHODOLOGY/APPROACH: During FY88 this task is to estimate school size and species identification of ETP dolphins using vertical photography train new personnel in photographic sampling and image interpretation techniques, examine the pattern of distortion inherent in aerial camera systems, and examine variability in length determination of cetaceans from aerial photographs. Finally, the task will implement sampling of pinniped rookeries to monitor pup production of California pinnipeds.

C. PRODUCT/SERVICES: Information provided by the task is analyzed to detect changes in abundance of stocks of dolphins associated with the U. S. tuna fishery in the ETP. This and other information developed is used to 1) estimate trends in abundance of ETP stocks of dolphins associated with the fishery and 2) assess the effects of fishing on changes in abundance. In addition, information produced on coastal pinnipeds will be used to 1) develop actions to protect stocks of California marine mammals from unnecessary fishery mortality, 2) determine allowable take for public display purposes, and 3) evaluate the effects of incidental take of marine mammals by coastal fisheries on the health of overall ecosystems.

D. CLIENTS: Products provided by this task are used by NMFS offices charged with drafting management measures for the U.S. tuna fishery in the ETP and by NMFS offices charged with drafting measures to control the take of coastal marine mammals.

E. CONTRACTS:

FORM II
CYOP - RESOURCE SUMMARY

NOAA/NMFS

DATE	14 Oct 87	
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TITLE Photographic & Remote Sensing

HQ CONTRACT(S)

TASK NAMES	TASK#1	TASK#2	TASK#3	TASK#4	TOTALS
OBJECT CLASS	8L1A5VR4				
DIRECT LABOR	42.4				42.4
PERS.BENEFITS	5.5				5.5
TRAVEL	8.5				8.5
TRANSPORTATION					
RENT, COMM., UTIL.					
PRINT/REPROD.					
CONTRACTS	9.5				9.5
SUPPLIES/MATERIALS	38.0				38.0
EQUIPMENT	2.2				2.2
GRANTS					
OTHER	4.0				4.0
TOTALS	110.1				110.1
FTE (FTP)	1.0				1.0
FTE (OTFTP)	1.0				1.0

VESSELS
SEA DAYS ALLOC.

NOAA CHARTERS

COST OF CHARTERS

FREE DAYS

CROSS REFERENCES

FORM III
PERSONNEL SCHEDULE

NOAA/NMFS

FMC	REF. NO.	PAGE
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#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
	Bernard, H.	Fishery Biologist	GS/7/1	100	8L1A5VR4

NOAA/NMFS

TASK

MAJOR MILESTONES, ACTIVITIES, AND EVENTS

8L1A5VR4

(See SWC 8)

FY 88 | 89

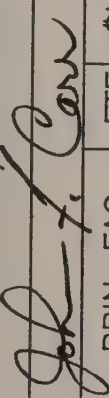
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FORM I PLAN SUMMARY

NOAA/NMFS

FMC	REF.NO.	PAGE
SWC	116	1 of 4

APPROVAL SIGNATURE					
TITLE	PRIN. FAC.	FTE	\$K	UNIT LEADER	LINE ITEM NAME
Fishery Enhancement and Dynamics	Honolulu, HI	3.63	145.1	J. Polovina	Resource Information

A. PROBLEM STATEMENT/OBJECTIVE:

This task investigates population dynamics and resource assessment for fishery resources around tropical island ecosystems. The work includes development of new quantitative approaches and specifically addresses assessment, forecasting, and management of the Hawaiian lobster fishery.

B. METHODOLOGY/APPROACH:

Quantitative models are used to explain and forecast changes within and between island ecosystems. In the lobsters assessment both standardized annual research cruise data and commercial fishery catch and effort data will be used to forecast future catches.

C. PRODUCT/SERVICES:

An annual status of lobster stocks report is produced for the Western Pacific Regional Fishery Management Council. Ecological and methodological results are published in scientific journals.

D. CLIENTS:

Western Pacific Regional Fishery Management Council and island governments.

E. CONTRACTS:

None

FORM II

NOAA/NMFS

CYOP - RESOURCE SUMMARY

DATE	October 20, 1987	
FMC	REF.NO.	PAGE
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TITLE ☐ Fishery Enhancement and DynamicsHQ CONTACT(S) ☐

TASK NAMES ☐	TASK#1	TASK#2	TASK#3	TASK#4	▽
OBJECT CLASS	8LIA4BRS				TOTALS
DIRECT LABOR	112.9				112.9
PERS.BENEFITS	14.5				14.5
TRAVEL	4.5				4.5
TRANSPORTATION	1.5				1.5
RENT,COMM.,UTIL.	1.0				1.0
PRINT/REPROD.	--				--
CONTRACTS	--				--
SUPPLIES/MATERIALS	8.7				8.7
EQUIPMENT	2.0				2.0
GRANTS	--				--
OTHER	--				--
TOTALS ☐	145.1				145.1
FTE (FTP)	2				2
FTE (OTFTP)	1.63				1.63

VESSELS	
# SEA DAYS ALLOC.	
18	
NOAA	CHARTERS
18	0
COST OF CHARTERS	
# FREE DAYS	
CROSS REFERENCES	

FORM III

NOAA/NMFS

PERSONNEL SCHEDULE

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#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
FTP					
1	Jeffrey J. Polovina	Mathematical Statistician	GM/13/00	100.00%	8L1A4BRS
2	Robert B. Moffitt	Fishery Biologist Research	GS/09/04	100.00%	8L1A4BRS
TEMPORARIES					
3	Ronald A. Benco	Computer Clerk	GS/04/01	63.00%	8L1A4BRS
4	Frank A. Parrish	Biological Aid	GS/04/01	88.00%	8L1A4BRS

NOAA/NMFS

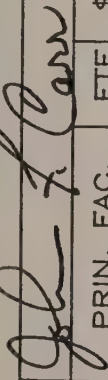
MAJOR MILESTONES, ACTIVITIES, AND EVENTS

[illegible]

FORM 1 PLAN SUMMARY

NOAA/NMFS

FMC	REF.NO.	PAGE
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APPROVAL SIGNATURE					
TITLE	PRIN. FAC.	FTE	\$K	UNIT LEADER	LINE ITEM NAME
Hawaiian Monk Seal/Pacific Turtles	Honolulu Lab.	9.85	357.3	W. G. Gilmartin	Resource Information

A. PROBLEM STATEMENT/OBJECTIVE: Research and other activities directed at monitoring and recovery of the endangered Hawaiian monk seal and the endangered and threatened central and western Pacific turtles is mandated to NMFS under the Marine Mammal Protection Act of 1972 and the Endangered Species Act of 1973. Recovery Plans have been developed for the monk seal and turtles in the Hawaiian Archipelago. In addition to monitoring population status, research conducted in this program identifies impediments to recovery and tests solutions to these problems.

B. METHODOLOGY/APPROACH: The research effort for both seals and turtles addresses high priority tasks identified in the Recovery Plans. Primary population monitoring techniques include annual estimation of monk seal births and number of green turtle nests at the major breeding sites. Tagging of pups and nesting turtles facilitate these determinations. Resightings of tagged animals provide data on growth, survival, movement, and reproductive patterns. Beach censuses of seals are converted to total population size and composition. Survival of young female monk seals is being enhanced by a temporary captive maintenance program. Drug research on captive adult male seals and observations of male aggression related behaviors which result in deaths of females will receive high priority this fiscal year prior to field research to alleviate the problem in 1989.

C. PRODUCT/SERVICES: The primary product goal is increasing survivorship and total numbers of these protected species following implementation of recovery activities. The research findings and the results of the recovery actions are summarized in technical reports for publication.

D. CLIENTS: Research findings and the results of recovery actions are provided to the Congress, the Marine Mammal Commission, the Southwest Region, and the respective Recovery Teams. The information is used to guide further work on these species, assess impacts of coastal development and other activities on the species, and to determine when the populations have "recovered."

E. CONTRACTS: --

FORM II

NOAA/NMFS

CYOP - RESOURCE SUMMARY

DATE	October 20, 1987	
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TITLE ▷

Hawaiian Monk Seal/Pacific Turtles

HQ CONTACT(S) ▷

TASK NAMES ▷

OBJECT CLASS

DIRECT LABOR

PERS.BENEFITS

TRAVEL

TRANSPORTATION

RENT, COMM., UTIL.

PRINT/REPROD.

CONTRACTS

SUPPLIES/MATERIALS

EQUIPMENT

GRANTS

OTHER

TOTALS ▷

FTE (FTP)

FTE (OTFTP)

TASK NAMES	Turtles TASK#1	Endangered species TASK#2	Seals TASK#3	TASK#4	▽
	8L1A5VT0	8L1A5VT1	8L1A3VW0		TOTALS
DIRECT LABOR	28.3	97.4	166.1		291.8
PERS.BENEFITS	3.7	12.7	21.7		38.1
TRAVEL	--	--	5.1		5.1
TRANSPORTATION	--	--	--		--
RENT, COMM., UTIL.	--	--	3.7		3.7
PRINT/REPROD.	--	--	1.0		1.0
CONTRACTS	--	--	--		--
SUPPLIES/MATERIALS	--	--	17.6		17.6
EQUIPMENT	--	--	--		--
GRANTS	--	--	--		--
OTHER	--	--	--		--
TOTALS	32.0	110.1	215.2		357.3
FTE (FTP)	0.75	2.0	1.0		3.75
FTE (OTFTP)	--	--	6.1		6.1.

VESSELS

SEA DAYS ALLOC.

37

NOAA CHARTERS

37

COST OF CHARTERS

FREE DAYS

CROSS REFERENCES

FORM III

NOAA/NMFS

PERSONNEL SCHEDULE

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#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
FTP					
1	Timothy Gerrodette	Fishery Biologist Research	GS/12/04	100.00%	8L1A3VW0
PTP					
2	Doris J. Alcorn	Wildlife Biologist	GS/09/02	70.00%	8L1A3VW0
TEMPORARIES					
3	Thea C. Johanos Kam	Wildlife Biologist	GS/07/01	100.00%	8L1A3VW0
4	Robin L. Westlake	Biological Technician Wildlife	GS/06/01	83.00%	8L1A3VW0
5	Robert G. Forsyth	Biological Technician Wildlife	GS/06/01	100.00%	8L1A3VW0
6	Susan L. Austin	Biological Technician Wildlife	GS/05/01	10.00%	8L1A3VW0
7	Brenda L. Becker	Biological Technician Wildlife	GS/05/01	75.00%	8L1A3VW0
8	Barry K. Choy	Biological Aid	GS/03/01	61.00%	8L1A3VW0
9	Fred Frizelle	Computer Clerk	GS/04/01	25.00%	8L1A3VW0
10	Michelle L. Reddy	Biological Aid	GS/02/01	20.00%	8L1A3VW0
11	Michael K. Wilcox	Biological Aid	GS/02/01	50.00%	8L1A3VW0
12	Heather J. Walbridge	Biological Aid	GS/02/01	25.00%	8L1A3VW0
FTP					
13	George H. Balazs	Zoologist	GS/11/05	75.00%	8L1A5VT0*
14	William G. Gilmartin	Wildlife Biologist Research	GM/13/00	25.00%	8L1A41L2
15	John R. Henderson	Fishery Biologist Research	GS/11/04	100.00%	8L1A5VT1
				100.00%	8L1A5VT1

NOAA/NMFS

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[illegible]

FORM I
PLAN SUMMARY

NOAA/NMFS

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APPROVAL SIGNATURE 

TITLE

PRIN. FAC.

FTE

\$K

UNIT LEADER

LINE ITEM NAME

Fishery Information Network

La Jolla, CA

3.1

178.0

Carr

A. PROBLEM STATEMENT/OBJECTIVE:

To provide timely and accurate fisheries data and information required for planning and management of Pacific Ocean fisheries to states, councils, territories, and common wealth agencies.

B. METHODOLOGY/APPROACH:

Fishery data are collected primarily by state agencies and then accumulated, compiled and maintained in a regional data base system. FIN provides data summaries and answers data requests from all qualified users.

C. PRODUCT/SERVICES:

The FIN provides resources and technical assistance to state, territorial, and commonwealth fisheries agencies as a cooperative effort to establish and maintain regional data networks to meet informational requirement of the MFCMA.

D. CLIENTS:

Users of FIN's data banks include state and federal government agencies, university researchers, consulting firms and industry.

E. CONTRACTS:

One contract with the Pacific Marine Fisheries Commission (PMFC) for \$35K as the SWFC share in support of the west coast fisheries data base.

FORM II

NOAA/NMFS

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TITLE ☐ Fishery Information Network (FIN)HQ CONTACT(S) ☐

TASK NAMES ☐	PacFIN	WestPacFIN	TASK#1	TASK#2	TASK#3	TASK#4	▽
OBJECT CLASS	TASK#1	TASK#2	TASK#3	TASK#4	TOTALS		TOTALS
DIRECT LABOR	8L1C1AUP	8L1C1AUW					91.7
PERS.BENEFITS	35.8	55.9					27.2
TRAVEL	5.7	21.5					7.0
TRANSPORTATION	0.5	6.5					
RENT, COMM., UTIL.	1.5	1.5					3.0
PRINT/REPROD.							
CONTRACTS	35.0	8.4					43.4
SUPPLIES/MATERIALS		3.3					3.3
EQUIPMENT		2.4					2.4
GRANTS							
OTHER							
TOTALS ☐	78.5	99.5					178.0
FTE (FTP)	1.0	1.0					2.0
FTE (OTFTP)		1.1					1.1

VESSELS	
# SEA DAYS ALLOC.	
N.A.	
NOAA	CHARTERS
COST OF CHARTERS	
# FREE DAYS	
CROSS REFERENCES	

FORM III

NOAA/NMFS

PERSONNEL SCHEDULE

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#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
1.	Gerald F. Hornof	Computer Specialist	GS-12-4	100	8L1C1AUP
2.	David C. Hamm	Comp. Syst. Analyst	GS-12-7	100	8L1C1AUW
3.	Robert Henderson (PTP)	Comp. Programmer	GS- 5-1	25	8L1C1AUW
4.	Michael M. Quach (T)	Comp. Clerk	GS- 4-1	88	8L1C1AUW

NOAA/NMFS

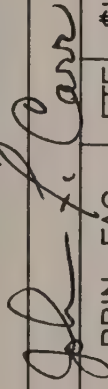
MAJOR MILESTONES, ACTIVITIES, AND EVENTS

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FORM I
PLAN SUMMARY

NOAA/NMFS

FMC	REF.NO.	PAGE
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APPROVAL SIGNATURE					
TITLE	PRIN. FAC.	FTE	\$K	UNIT LEADER	LINE ITEM NAME
Limnology of Lake Meade	Las Vegas, NV	-	300.0	CARR, J.	Resource Information

A. PROBLEM STATEMENT/OBJECTIVE:

Congressional add-on. There is no apparent relationship to NMFS objectives.

B. METHODOLOGY/APPROACH:

Grant with University of Nevada, Las Vegas

C. PRODUCT/SERVICES:

Limnological study.

D. CLIENTS:

University of Nevada, Las Vegas

E. CONTRACTS:

None

FORM II

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CYOP - RESOURCE SUMMARY

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TITLE



Limnology of Lake Meade

HQ CONTACT(S)



TASK NAMES



8L1A1AXX

OBJECT CLASS

TASK #1

TASK #2

TASK #3

TASK #4

TOTALS

DIRECT LABOR

PERS.BENEFITS

TRAVEL

TRANSPORTATION

RENT, COMM., UTIL.

PRINT/REPROD.

CONTRACTS

SUPPLIES/MATERIALS

EQUIPMENT

GRANTS

OTHER

TOTALS



FTE (FTP)

FTE (OTFTP)

NONE

VESSELS

SEA DAYS ALLOC.

NOAA

CHARTERS

COST OF CHARTERS

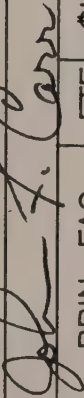
FREE DAYS

CROSS REFERENCES

FORM I
PLAN SUMMARY

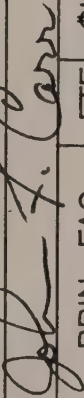
NOAA/NMFS

FMC	REF.NO.	PAGE
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APPROVAL SIGNATURE 

TITLE

FMP Development

PRIN. FAC. 
Honolulu, HI

UNIT LEADER

CARR, J.

LINE ITEM NAME

Resource Information

A. PROBLEM STATEMENT/OBJECTIVE:

Congressional add-on

B. METHODOLOGY/APPROACH:

Grant with Oceanic Institute

C. PRODUCT/SERVICES:

Report

D. CLIENTS:

Oceanic Institute

E. CONTRACTS:

None.

FORM II

NOAA/NMFS

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TITLE > FMD Development

HQ CONTACT(S) >

TASK NAMES	8L1A1AXX	TASK#1	TASK#2	TASK#3	TASK#4	▽
OBJECT CLASS						TOTALS
DIRECT LABOR						
PERS.BENEFITS						
TRAVEL						
TRANSPORTATION						
RENT, COMM., UTIL.						
PRINT/REPROD.						
CONTRACTS						
SUPPLIES/MATERIALS						
EQUIPMENT						
GRANTS	275.0					275.0
OTHER						
TOTALS >	275.0					275.0
FTE (FTP)	-					-
FTE (OTFTP)	-					-

NONE

VESSELS	
# SEA DAYS ALLOC.	
NOAA	CHARTERS
COST OF CHARTERS	
# FREE DAYS	
CROSS REFERENCES	

FORM I
PLAN SUMMARY

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APPROVAL SIGNATURE

TITLE

PRIN. FAC.

FTE

\$K

UNIT LEADER

LINE ITEM NAME

Scientific Editing,
Fishery Bulletin

1.5

53.6

Dizon, A.

A. PROBLEM STATEMENT/OBJECTIVE:

Perform scientific editing for Fishery Bulletin and Technical Reports.

B. METHODOLOGY/APPROACH:

N/A

C. PRODUCT/SERVICES:

Peer-reviewed and accepted manuscripts submitted to the Scientific Publications Office (Seattle) for four yearly issues.

D. CLIENTS:

N/A

E. CONTRACTS:

N/A

FORM II
CYOP - RESOURCE SUMMARY

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TITLE Scientific Editing, Fishery Bulletin

HQ CONTRACT(S) Hoyt Wheeland

TASK NAMES	Fishery Bulletin	TASK#1	TASK#2	TASK#3	TASK#4	TOTALS
OBJECT CLASS		8L1A1AFB				
DIRECT LABOR		37.6				37.6
PERS.BENEFITS		6.0				6.0
TRAVEL		5.0				5.0
TRANSPORTATION						
RENT, COMM., UTIL.						
PRINT/REPROD.		1.0				1.0
CONTRACTS						
SUPPLIES/MATERIALS		2.0				2.0
EQUIPMENT		2.0				2.0
GRANTS						
OTHER						
TOTALS		53.6				53.6
FTE (FTP)		0.5				0.5
FTE (OTFTP)		1.0				1.0

VESELS
SEA DAYS ALLOC.

NOAA CHARTERS

COST OF CHARTERS

FREE DAYS

CROSS REFERENCES

#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
	Dizon, A.	Supv. Fishery Biol.	GM-13	50	8L1A1AFB
	O'Brien, L.	Editorial Clerk	GS-5	100	8L1A1AFB

MILESTONE ARRAY

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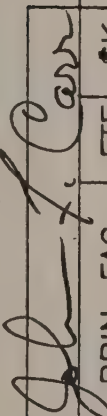
	FY 88	89	90
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FORM 1 PLAN SUMMARY

NOAA/NMFS

FMC	REF.NO.	PAGE
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APPROVAL SIGNATURE 

TITLE

UNIT LEADER

LINE ITEM NAME

Shallow Water Habitat Invest.

La Jolla, CA

35.5 J.R. Hunter

A. PROBLEM STATEMENT/OBJECTIVE: Ninety percent of historical shallow water habitat in southern California is lost due to dredge and fill activities. Objectives of this task are to determine the extent California halibut and other groundfishes are dependent upon remaining areas; establish the value of the habitat to the fishery; and identify measures for mitigating habitat loss or alteration.

B. METHODOLOGY/APPROACH: Conduct monthly fish surveys of nearshore coastal areas and bay and lagoon habitats from Mission Bay to Agua Hedionda, California over 2 years. Estimate abundance and habitat specific density of California halibut and other groundfishes; determine growth and settlement rates of halibut; and characterize habitat types.

C. PRODUCT/SERVICES: Annual and final reports of research results which indicate value of specific habitat types to fisheries and recommends measures for mitigation of habitat loss.

D. CLIENTS: Habitat conservation staff of Southwest Region along with other groups (e.g., California Department of Fish and Game and U.S. Fish and Wildlife Service) which have responsibility for reviewing permits for shoreline development and making decisions regarding mitigation of habitat loss.

E. CONTRACTS: None let in FY 88.

FORM II

NOAA/NMFS

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TITLE	▷	Shallow Water Habitat Investigations
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HQ CONTACT(S)	▷	
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TASK NAMES▷	TASK#1	TASK#2	TASK#3	TASK#4	▽
OBJECT CLASS	8L1A3AK1				TOTALS
DIRECT LABOR	30.6				
PERS.BENEFITS	4.9				
TRAVEL	0				
TRANSPORTATION	0				
RENT,COMM.,UTIL.	0				
PRINT/REPROD.	0				
CONTRACTS	0				
SUPPLIES/MATERIALS	0				
EQUIPMENT	0				
GRANTS	0				
OTHER	0				
TOTALS▷	35.5				
FTE (FTP)	0				
FTE (OTFTP)	2				

VESSELS	
# SEA DAYS ALLOC.	
0	
NOAA	CHARTERS
COST OF CHARTERS	
# FREE DAYS	
CROSS REFERENCES	

FORM III

NOAA/NMFS

PERSONNEL SCHEDULE

FMC	REF.NO.	PAGE
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#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
<u>OTHER</u>					
1.	Sharon H. Kramer	Biol. Technician	GS	50%	8L1A3AK1
2.	Steve Swailes	Biol. Tech. Fish.	GS	100%	8L2A3AK1
3.	Michael J. Davis	Biological Aid	GS	50%	8L2A3AK1

NOAA/NMFS

NOAA/NMFS

NOAA/NMFSNOAA/NMFS

FORM I
PLAN SUMMARY

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APPROVAL SIGNATURE

[Signature]

TITLE

PRIN. FAC.

FTE

\$K

UNIT LEADER

LINE ITEM NAME

Antarctic Krill Biomass

La Jolla, CA

0.9

20.3

Reuben Lasker

A. PROBLEM STATEMENT/OBJECTIVE:

The objective of this task is to devise a fishery independent method for assessing the biomass of the Antarctic krill, Euphausia superba.

B. METHODOLOGY/APPROACH:

This technique is based on the fact that euphausiid shrimp have characteristic and constant molting frequencies (depending on temperature). The number of cast molts then are proportional to the number of krill in a sampled population. This is an initial attempt to see if E. superba can be assessed using recovered molts. Comparison with acoustic signals from krill will be made on the same cruise.

C. PRODUCT/SERVICES:

A report on the biomass of krill will be produced as well as a protocol for the continuing monitoring of krill biomass using the molt-recovery technique.

D. CLIENTS: NOAA is heavily involved in Antarctic research and the Antarctic office will be the chief recipient of the results.

E. CONTRACTS: None

FORM II

NOAA/NMFS

CYOP - RESOURCE SUMMARY

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TITLE		Antarctic Krill Biomass	
HQ CONTACT(S)			
TASK NAMES		▽	
OBJECT CLASS	TASK#1	TASK#2	TASK#3
	8L1A6X00		TASK#4
DIRECT LABOR	16.0		
PERS.BENEFITS	2.1		
TRAVEL	0.5		
TRANSPORTATION	0.2		
RENT,COMM.,UTIL.	0		
PRINT/REPROD.	0		
CONTRACTS	0		
SUPPLIES/MATERIALS	0.8		
EQUIPMENT	0.7		
GRANTS	0		
OTHER	0		
TOTALS	20.3		
FTE (FTP)	0		
FTE (OTHER)	0.8		

VESSELS	
# SEA DAYS ALLOC.	
NOAA	CHARTERS
COST OF CHARTERS	
# FREE DAYS	
CROSS REFERENCES	

FORM III

NOAA/NMFS

PERSONNEL SCHEDULE

FMC	REF.NO.	PAGE
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#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
	Steve Butler	Fishery Biologist	GS 5/1	87%	8L1A6X00

NOAA/NMFS

NOAA/NMFS

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FORM I
PLAN SUMMARY

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APPROVAL SIGNATURE	J. L. Carr		
TITLE	PRIN. FAC.	FTE	\$K
U.S. - Spain Joint Research		0	7.3
	UNIT LEADER	LINE ITEM NAME	
	Reuben Lasker		

A. PROBLEM STATEMENT/OBJECTIVE: The SWC is a collaborator in the Sardine/Anchovy Recruitment Project (SARP) in Spain. The objective of the research is to determine the fishery independent factors (environmental) that affect recruitment of the sardine and anchovy off the Iberian Peninsula.

B. METHODOLOGY/APPROACH: SARP methodology is based on the precise technique of age dating fishes from their otoliths. With sequential sampling of larvae and juveniles, major survival windows can be pinpointed during a spawning season and the environmental factors affecting survival/mortality can be correlated with subsequent recruitment. Ship time and seagoing personnel are supplied by Spain.

C. PRODUCT/SERVICES: Information obtained in this SARP program will be published in peer review journals for scientific scrutiny.

D. CLIENTS: Instituto Espanol Oceanografia, Intergovernmental Oceanographic Commission, NOAA, and numerous other agencies.

E. CONTRACTS: None

FORM II

NOAA/NMFS

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TITLE	U.S. - Spain Joint Research
HQ CONTACT(S)	

TASK NAMES	TASK#1	TASK#2	TASK#3	TASK#4	TOTALS
OBJECT CLASS	ALLA6A00				
DIRECT LABOR	0				
PERS.BENEFITS	0				
TRAVEL	2.6				
TRANSPORTATION	0				
RENT,COMM.,UTIL.	4.7				
PRINT/REPROD.	0				
CONTRACTS	0				
SUPPLIES/MATERIALS	0				
EQUIPMENT	0				
GRANTS	0				
OTHER	0				
TOTALS	7.3				
FTE (FTP)	0				
FTE (OTHER)	0				

VESSELS	
# SEA DAYS ALLOC.	
NOAA	CHARTERS
COST OF CHARTERS	
# FREE DAYS	
CROSS REFERENCES	

FORM III

NOAA/NMFS

PERSONNEL SCHEDULE

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#	NAME	TITLE	PAY PLAN/GRADE/STEP	% TIME	TASK #
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None

NOAA/NMFS

NOAA/NMFS

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FORM II

NOAA/NMFS

CYOP - RESOURCE SUMMARY

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TITLE ☐ San Francisco State University SupportHQ CONTACT(S) ☐

TASK NAMES ☐	TASK#1	TASK#2	TASK#3	TASK#4	TOTALS
OBJECT CLASS	RL1A3GMF				
DIRECT LABOR					
PERS.BENEFITS					
TRAVEL					
TRANSPORTATION					
RENT,COMM.,UTIL.	18.0				18.0
PRINT/REPROD.					
CONTRACTS					
SUPPLIES/MATERIALS					
EQUIPMENT					
GRANTS					
OTHER					
TOTALS ☐	18.0				18.0
FTE (FTP)					
FTE (OTFTP)					

VESSELS

SEA DAYS ALLOC.

NOAA

CHARTERS

COST OF CHARTERS

FREE DAYS

CROSS REFERENCES

FORM **V**CURRENT YEAR RESOURCE ALLOCATION (\$K)
FOR FY 1988

CYRA-FMC SUMMARY FOR SWC

1: CDO, CFRD, FMMID, FFRD, SR, SCI, 2: HONO, 3: TIB, 4: MONT, 5: NEV.

Geographical Location (Lab, Field Office)	NO. FTEs	III-1	III-2	III-3	III-4	III-5	III-6	IV-1	MISC.	TOTAL
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1. La Jolla Lab

1A) Center Director
and Admin.

CYOP 035

9W6N40XX	12.1	250.5	156.8		415.7	174.7	54.8			1052.5
	12.1	250.5	156.8	0.0	415.7	174.7	54.8	0.0	0.0	1052.5

CYOP 036

BLIC1A80	6.0	64.6	25.4		107.2	45.2	14.1			256.5
BLIC1A80			15.0							15.0
	6.0	64.6	40.4	0.0	107.2	45.2	14.1	0.0	0.0	271.5

CYOP 037

BLIC1A1T	2.0	14.2	8.9		23.6	9.9	3.1			59.7
BLIC1A1XX		125.1	78.3	22.6	207.6	87.3	27.4			548.3
BLIC1A1L	2.0	20.4	12.8		33.8	14.2	4.4			85.6
BLIC1A1YD	3.0	27.6	17.3		45.8	19.4	6.0			116.1
BLIC1A1YF	3.0	8.8	5.6		14.6	6.2	1.9			37.1
	10.0	196.1	122.9	22.6	325.4	137.0	42.8	0.0	0.0	846.8

CYOP 123

BLIC1A1UP	1.0	18.6	11.6		31.3	12.9	4.1			78.5
	1.0	18.6	11.6	0.0	31.3	12.9	4.1	0.0	0.0	78.5

CYOP 901

BLIC1A1AFB	1.5								53.6	53.6
	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	53.6	53.6

Director/Admin Total	30.6	529.8	331.7	22.6	879.6	369.8	115.8	0.0	53.6	2302.9
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1B) Coastal Fisheries
Resources Division

CYOP 001

BLIC3A1A0	10.8	422.8	74.6							497.4
	10.8	422.8	74.6	0.0	0.0	0.0	0.0	0.0	0.0	497.4

CYOP 004

FORM **V**CURRENT YEAR RESOURCE ALLOCATION (\$K)
FOR FY' 1988

CYRA-FMC SUMMARY FOR SWC

1: CDO, CFRD, FMMID, PFRD, SR, SCI, 2: HOND, 3: TIB, 4: MONT, 5: NEV.

Geographical Location (Lab, Field Office)	NO. FTEs	III-1	III-2	III-3	III-4	III-5	III-6	IV-1	MISC.	TOTAL
BLIA4BE0	6.0		105.4				149.2			254.6
	6.0	0.0	105.4	0.0	0.0	0.0	149.2	0.0	0.0	254.6
CYOP 018										
BLIA3AG0	5.0	103.0	102.9							205.9
	5.0	103.0	102.9	0.0	0.0	0.0	0.0	0.0	0.0	205.9
CYOP 019										
BLIA6AH0	9.5	225.5	116.2							341.7
	9.5	225.5	116.2	0.0	0.0	0.0	0.0	0.0	0.0	341.7
CYOP 020										
BLIA6AJ0	4.7	73.0	73.0							146.0
	4.7	73.0	73.0	0.0	0.0	0.0	0.0	0.0	0.0	146.0
CYOP 091										
BLIC2AS0	6.5	136.2	136.0				20.0			292.2
BLIC2AS2	0.5	35.0	35.0			70.0				140.0
	7.0	171.2	171.0	0.0	0.0	70.0	20.0	0.0	0.0	432.2
CYOP 903										
BLIA3AK1	2.0	35.5								35.5
	2.0	35.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.5
CYOP 904										
BLIA6X00	0.9								20.3	20.3
	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.3	20.3
CYOP 912										
BLIA6A00	0.0	7.3								7.3
	0.0	7.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.3
Division Total :	45.9	1038.3	643.1	0.0	0.0	70.0	169.2	0.0	20.3	1940.9

1C) Fishery-Marine Mammal
Interactions Division

CYOP 008

FORM **V**CURRENT YEAR RESOURCE ALLOCATION (\$K)
FOR FY' 1988

CYRA-FMC SUMMARY FOR SMC

1: CDD, CFRD, FMMID, PFRD, SR, SCI, 2: HOND, 3: TIB, 4: MONT, 5: NEV.

Geographical Location (Lab, Field Office)	NO. FTEs	-----RBOs-----								
		III-1	III-2	III-3	III-4	III-5	III-6	IV-1	MISC.	TOTAL
BL1C4VA1	6.4				166.5					166.5
BL1C4VA2	2.0				98.8					98.8
	8.4	0.0	0.0	0.0	265.3	0.0	0.0	0.0	0.0	265.3
CYOP 011										
BL1A5VU1	6.5				239.3					239.3
	6.5	0.0	0.0	0.0	239.3	0.0	0.0	0.0	0.0	239.3
CYOP 012										
BL1A6AW1	5.0				206.8					206.8
BL1A6AW2	1.5				58.2					58.2
	6.5	0.0	0.0	0.0	265.0	0.0	0.0	0.0	0.0	265.0
CYOP 096										
BL1A5VR1	3.0				166.8					166.8
	3.0	0.0	0.0	0.0	166.8	0.0	0.0	0.0	0.0	166.8
CYOP 097										
BL1A6VWD	4.0				384.8					384.8
	4.0	0.0	0.0	0.0	384.8	0.0	0.0	0.0	0.0	384.8
CYOP 098										
BL1A5VR4	2.0				110.1					110.1
	2.0	0.0	0.0	0.0	110.1	0.0	0.0	0.0	0.0	110.1
Division Total :	30.4	0.0	0.0	0.0	1431.3	0.0	0.0	0.0	0.0	1431.3

1D) Pelagic Fisheries
Resources Division

CYOP 050

BL1C5AB2	4.5					186.3	43.4			229.7
BL1C2A20	1.5					66.8				66.8
BL1C5AB1	1.0					63.8				63.8
	7.0	0.0	0.0	0.0	0.0	316.8	43.4	0.0	0.0	360.2

CYOP 053

BL1C2A30	2.0					94.1				94.1
BL1C2A40	1.0					105.4				105.4
	3.0	0.0	0.0	0.0	0.0	199.5	0.0	0.0	0.0	199.5

FORM **V**CURRENT YEAR RESOURCE ALLOCATION (\$K)
FOR FY' 1988

CYRA-FMC SUMMARY FOR SWC

1: CDO, CFRD, FHMID, PFRD, SR, SCI, 2: HONO, 3: TIB, 4: MONT, 5: NEV.

Geographical Location (Lab, Field Office)	NO. FTEs	-----MBOs-----								
		III-1	III-2	III-3	III-4	III-5	III-6	IV-1	MISC.	TOTAL
CYOP 057										
8L1C1AW1	3.5					136.0				136.0
8L1C1VW2	5.5				173.4					173.4
	9.0	0.0	0.0	0.0	173.4	136.0	0.0	0.0	0.0	309.4

Division Total : 19.0 0.0 0.0 0.0 173.4 652.3 43.4 0.0 0.0 869.1

1E) Senior Scientist

CYOP 015										
8L1A5VP1	2.7				119.1					119.1
	2.7	0.0	0.0	0.0	119.1	0.0	0.0	0.0	0.0	119.1
Division Total :	2.7	0.0	0.0	0.0	119.1	0.0	0.0	0.0	0.0	119.1
Location Total :	128.5	1568.1	974.8	22.6	2603.4	1092.1	328.4	0.0	73.9	6663.3
(La Jolla Laboratory)										

2) Honolulu Laboratory

CYOP 021										
8L1C5AC0	3.0			76.6	7.7	15.3	53.7			153.3
	3.0	0.0	0.0	76.6	7.7	15.3	53.7	0.0	0.0	153.3
CYOP 022										
8L1C2A00	2.8			142.8						142.8
	2.8	0.0	0.0	142.8	0.0	0.0	0.0	0.0	0.0	142.8
CYOP 025										
8L1A6AK0	4.3					182.9				182.9
	4.3	0.0	0.0	0.0	0.0	182.9	0.0	0.0	0.0	182.9
CYOP 033										
9W6N40H0	8.0			252.7	74.8	58.2	9.9			395.6
	8.0	0.0	0.0	252.7	74.8	58.2	9.9	0.0	0.0	395.6

CYOP 040

FORM **V**CURRENT YEAR RESOURCE ALLOCATION (\$K)
FOR FY' 1988

CYRA-FMC SUMMARY FOR SWC

1:CDO,CFRD,FMMID,FFRD,GR,SCI,2:HONO,3:TIB,4:MONT,5:NEV.

Geographical Location (Lab, Field Office)	NO. FTEs	-----MBOs-----								
		III-1	III-2	III-3	III-4	III-5	III-6	IV-1	MISC.	TOTAL
ELIC1AJ1	7.9			194.4	57.5	44.7	7.7			304.3
BLIC1AJ2	4.9			91.6	27.1	21.1	3.5			143.3
BLIC1AJ3	1.0			19.9	5.9	4.6	0.7			31.1
BLIC1AJ4	1.0			40.8	12.1	9.4	1.5			63.8
	14.8	0.0	0.0	346.7	102.6	79.8	13.4	0.0	0.0	542.5
CYOP 044										
BL1A6AL0	2.6			107.2						107.2
	2.6	0.0	0.0	107.2	0.0	0.0	0.0	0.0	0.0	107.2
CYOP 045										
BL1A6AE0	4.4			217.5						217.5
	4.4	0.0	0.0	217.5	0.0	0.0	0.0	0.0	0.0	217.5
CYOP 046										
BL1A4IL2	10.5			293.0						293.0
	10.5	0.0	0.0	293.0	0.0	0.0	0.0	0.0	0.0	293.0
CYOP 048										
BL1C5AH1	4.7			197.5						197.5
	4.7	0.0	0.0	197.5	0.0	0.0	0.0	0.0	0.0	197.5
CYOP 089										
BL1C2AP0	9.2			178.2		118.8				297.0
BL1C2AP1	0.7			43.3	12.9	16.0	3.8			76.0
	9.9	0.0	0.0	221.5	12.9	134.8	3.8	0.0	0.0	373.0
CYOP 116										
BL1A4BR5	3.6			145.1						145.1
	3.6	0.0	0.0	145.1	0.0	0.0	0.0	0.0	0.0	145.1
CYOP 119										
BL1A3VW0	7.1				215.2					215.2
BL1A5VT0	0.8				32.0					32.0
BL1A5VT1	2.0				110.1					110.1
	9.9	0.0	0.0	0.0	357.3	0.0	0.0	0.0	0.0	357.3
CYOP 123										
BL1C1AUW	2.1			49.8	49.7					99.5

CYRA-FMC SUMMARY FOR SWC

Geographical Location (Lab, Field Office)	NO. FTEs	MBOs								
		III-1	III-2	III-3	III-4	III-5	III-6	IV-1	MISC.	TOTAL
	2.1	0.0	0.0	49.8	49.7	0.0	0.0	0.0	0.0	99.5

8L1A1AFP	0.0		275.0						275.0
.....									
	0.0	0.0	0.0	275.0	0.0	0.0	0.0	0.0	275.0

[illegible]

CYDP 034

[illegible]

CYOP 036

[illegible]

CYDP 061

[illegible]

CYDP 062

8L1C2AM0	B.8	372.B								372.B
	B.8	372.B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	372.B

CYOP 064

BL1A3AP0	6.0	224.7								224.7
	6.0	224.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	224.7

CYDP 065

[illegible]

SFU

RL1A36MF	0.0	18.0	18.0
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FORM **V**CURRENT YEAR RESOURCE ALLOCATION (\$K)
FOR FY' 1988

CYRA-FMC SUMMARY FOR SWC

1:CDD,CFRD,FMMID,PFRD,SR.SCI,2:HOND,3:TIB,4:MONT,5:NEV.

Geographical Location (Lab, Field Office)	NO. FTEs	III-1	III-2	III-3	III-4	III-5	III-6	IV-1	MISC.	TOTAL
	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.0

Location Total : 32.6 1453.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1453.3
(Tiburon Laboratory)

4) Monterey (PFEG)

CYOP 092

BLIC5BT0	12.3	231.9	149.9	21.2			166.8		12.0	581.8
	12.3	231.9	149.9	21.2	0.0	0.0	166.8	0.0	12.0	581.8

Location Total : 12.3 231.9 149.9 21.2 0.0 0.0 166.8 0.0 12.0 581.8
(Monterey, PFEG)

5) Nevada (Lake Mead)

CYOP 124

BL1A1AUN	0.0								300.0	300.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	300.0	300.0

Location Total : 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 300.0 300.0
(Nevada, Lake Mead)

GRAND TOTAL,

ALL LOCATIONS	253.9	3253.3	1124.7	2369.2	3208.4	1563.1	576.0	0.0	385.9	12480.6
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